1987/88

ANNUAL REPORT 1987/88

Alberta

TRANSPORTATION
AND UTILITIES

ISSN 0836-1509

89-05218/

Alberta
TRANSPORTATION
AND UTILITIES

Office of the Minister
208 Legislature Building
Edmonton, Alberta
T5K 2B6
403/427-2080

The Honourable
W. Helen Hunley
Lieutenant-Governor
Province of Alberta

Madam:

I have the honour to submit to you the Annual Report of Alberta Transportation and Utilities for the fiscal year ending March 31, 1988.

Allen "Boomer" Adair

ALLEN 'BOOMER' ADAIR
Minister of Transportation
and Utilities

The fiscal year ending March 31, 1988 was again a year of notable progress in the development of Alberta's transportation systems and utilities initiatives.

In this, the third year of the three year Urban Transportation Program, approximately $167 million was allocated to Alberta cities. The four grant categories which provided funding in the Urban Program were: Basic Capital; Major Continuous Corridors and Primary Highway Connectors; Public Transit Operating and Primary Highway Maintenance. The City of Red Deer under the Major Continuous Corridors and Primary Highway Connectors Program received special consideration for their Railway Relocation/Major Roadway project. The northwest leg of the City of Calgary's light rail rapid transit system was opened to public use in this fiscal year. This project was funded primarily under the transit portion of the Basic Capital Grant. Approximately $9 million was provided under the five year Towns and Villages Streets Assistance Program. As in the past, the Streets Assistance Program provided funding for capital construction projects such as: street grading, gravelling, base course, paving, concrete sidewalks, curbs and gutters, storm sewers and various other projects.

During the 1987/88 fiscal year $591 million was expended on the construction of provincial roadways.

Highlights of the 1987/88 transportation and construction season were:

- The department's active participation in the planning and preparations for the "transportation" component of the 1988 Winter Olympic Games.
- The official opening of Highway 40 in Grande Cache on June 13, 1987. Although the highway was completed and available for use in late fall 1986, the official opening had been deferred due to the weather.
- Two major bridge structures were completed: Highway 2 over the Sheep River and the bridge structure over the McLeod River east of Edson.
- Surfacing of Highway 58 between Rainbow Lake and High Level was completed and a ribbon cutting at the Chinchaga River Bridge on October 2, 1987 celebrated the completion of the paving on this major access to Rainbow Lake.
- In this reporting period construction was completed on 762 kilometres of which approximately 114 kilometres were constructed under the twinning program. Multilaning of highly congested routes continued to receive priority, which resulted in several projects on the twinning of the Trans-Canada Highway (Highway 1) and the Yellowhead Highway (Highway 16) being completed.
- Continued progress was made under the Pavement Rehabilitation Program in the restoration of older highway pavement at an approximate cost of $34 million resulting in 386 kilometres of paved highway restored.
- Secondary road network improvements also continued to be a major priority with municipal and improvement district councils. Over $84 million was expended on approximately 817 kilometres of roadway under the Secondary Roads Program.

Highlights in the Utilities Divisions during 1987/88 were:

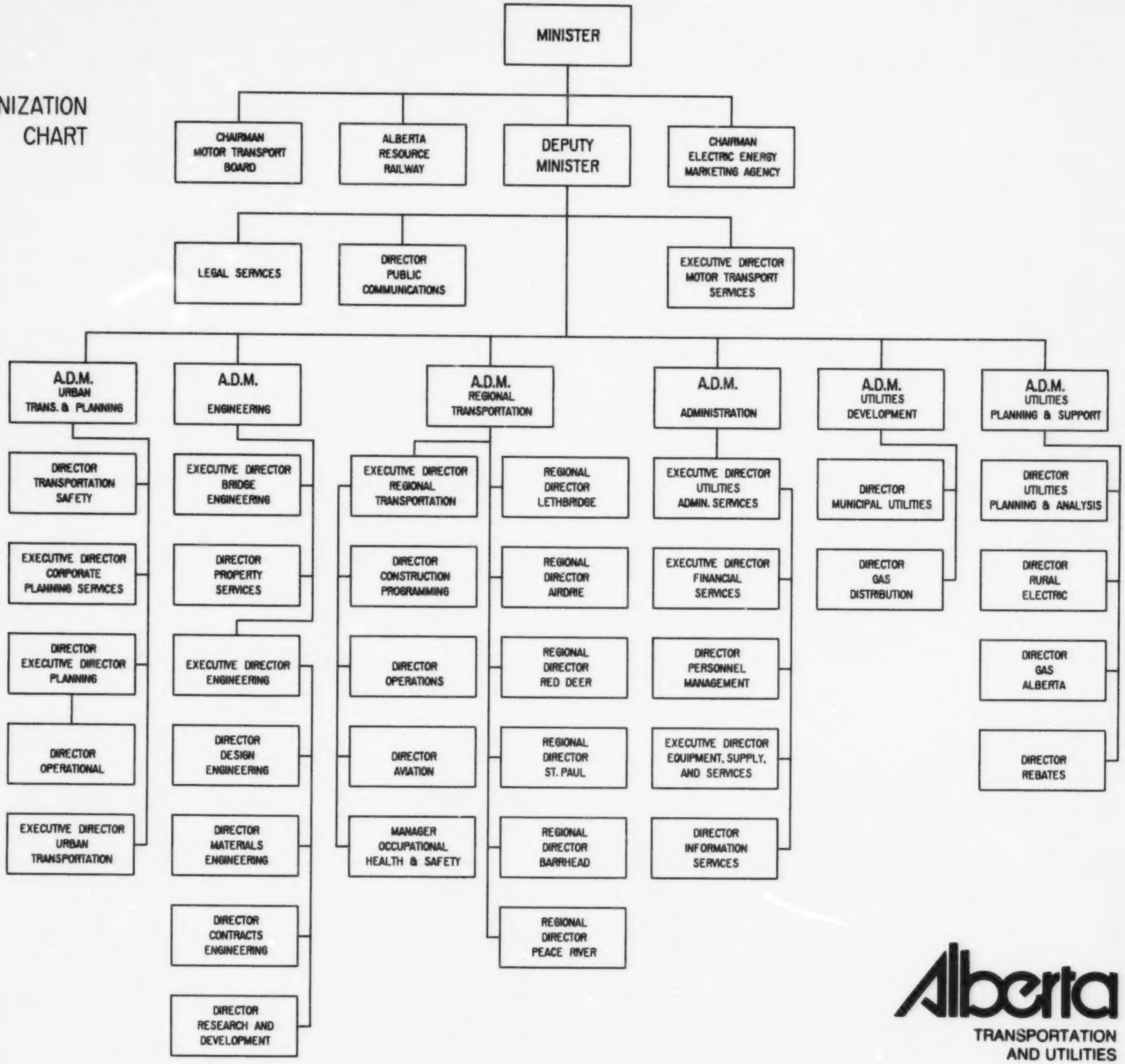
- The beginning of the planning and construction of the Henry Kroeger Water Supply project. This water supply line will provide a secure water supply to the municipalities in the Oyen/Youngstown/Hanna corridor.
- A review and analysis was done on the Small Power Inquiry results and development was completed of policy and program options to facilitate electricity production by small independent generators.
- The 1987/88 fiscal year was the first year of the new Rural Electrification Association (REA) Capital Rebuild Program. Twenty-one loans were issued to REA's for system rebuild and refinancing.

Once again, I am pleased to report that in these years of downsizing expenditures and staff, Alberta Transportation and Utilities' employees continue to successfully meet the challenges provided.

Our dedication remains constant to providing Albertans with an efficient, integrated transportation system for the movement of goods and people and to enhancing the availability and affordability of utilities services which are safe, efficient and effective.

HARVEY M. ALTON
Deputy Minister

ORGANIZATION CHART


MINISTER
CHAIRMAN MOTOR TRANSPORT BOARD
ALBERTA RESOURCE RAILWAY
DEPUTY MINISTER
CHAIRMAN ELECTRIC ENERGY MARKETING AGENCY
LEGAL SERVICES
DIRECTOR PUBLIC COMMUNICATIONS
EXECUTIVE DIRECTOR MOTOR TRANSPORT SERVICES
A.D.M. URBAN TRANS. & PLANNING
DIRECTOR TRANSPORTATION SAFETY
EXECUTIVE DIRECTOR CORPORATE PLANNING SERVICES
DIRECTOR EXECUTIVE DIRECTOR PLANNING
DIRECTOR OPERATIONAL
EXECUTIVE DIRECTOR URBAN TRANSPORTATION
A.D.M. ENGINEERING
EXECUTIVE DIRECTOR BRIDGE ENGINEERING
DIRECTOR PROPERTY SERVICES
EXECUTIVE DIRECTOR ENGINEERING
DIRECTOR DESIGN ENGINEERING
DIRECTOR MATERIALS ENGINEERING
DIRECTOR CONTRACTS ENGINEERING
DIRECTOR RESEARCH AND DEVELOPMENT
A.D.M. REGIONAL TRANSPORTATION
EXECUTIVE DIRECTOR REGIONAL TRANSPORTATION
DIRECTOR CONSTRUCTION PROGRAMMING
DIRECTOR OPERATIONS
DIRECTOR AVIATION
MANAGER OCCUPATIONAL HEALTH & SAFETY
REGIONAL DIRECTOR LETHBRIDGE
REGIONAL DIRECTOR AIRDRIE
REGIONAL DIRECTOR RED DEER
REGIONAL DIRECTOR ST. PAUL
REGIONAL DIRECTOR BARRHEAD
REGIONAL DIRECTOR PEACE RIVER
A.D.M. ADMINISTRATION
EXECUTIVE DIRECTOR UTILITIES ADMIN. SERVICES
EXECUTIVE DIRECTOR FINANCIAL SERVICES
DIRECTOR PERSONNEL MANAGEMENT
EXECUTIVE DIRECTOR EQUIPMENT, SUPPLY, AND SERVICES
DIRECTOR INFORMATION SERVICES
A.D.M. UTILITIES DEVELOPMENT
DIRECTOR MUNICIPAL UTILITIES
DIRECTOR GAS DISTRIBUTION
A.D.M. UTILITIES PLANNING & SUPPORT
DIRECTOR UTILITIES PLANNING & ANALYSIS
DIRECTOR RURAL ELECTRIC
DIRECTOR GAS ALBERTA
DIRECTOR REBATES

Alberta
TRANSPORTATION
AND UTILITIES

CHAIRMAN, MOTOR TRANSPORT BOARD – Responsible for managing the regulatory system governing intra and extra-provincial transportation within the framework of the Alberta and Federal Motor Transport Acts in the public interest.

MANAGING DIRECTOR, ALBERTA RESOURCES RAILWAY – Responsible for revenues generated from railway usage. Makes annual assessment on required railway maintenance.

CHAIRMAN, ELECTRIC ENERGY MARKETING AGENCY – Plans, directs, organizes, controls and evaluates the activities of the Agency, recommends policy and legislative changes, liaises with departments and related industries in carrying out the Agency's legislative mandate, and is an observing member of the Electric Utility Planning Council.

LEGAL SERVICES – Responsible for the provision of all required legal services to the department through seconded Attorney General's Department employees.

DIRECTOR, PUBLIC COMMUNICATIONS – Responsible for providing public relations counsel and communications services sustaining departmental policies, programs and activities.

EXECUTIVE DIRECTOR, MOTOR TRANSPORT SERVICES – Responsible for the regulation and control of the weights and dimensions of public vehicles. Provides administrative support to the Motor Transport Board.

ASSISTANT DEPUTY MINISTER, URBAN TRANSPORTATION AND PLANNING – Responsible for development and implementation of the Urban Transportation Program as well as the long-range systems planning and functional design of provincial highways.

DIRECTOR, TRANSPORTATION SAFETY BRANCH – Responsible for the development, administration and co-ordination of safety programs aimed at reducing the number of traffic collisions and fatalities in Alberta.

EXECUTIVE DIRECTOR, CORPORATE PLANNING – Responsible for corporate strategic planning, systems planning, traffic monitoring and projections and provides inter-government liaison for the department on transportation issues.

EXECUTIVE DIRECTOR, PLANNING – Responsible for co-ordinating location studies, functional planning and roadside development throughout the province.

DIRECTOR, OPERATIONAL PLANNING – Responsible for location studies and functional design for all new proposed highways and for upgrading existing highways throughout the province.

EXECUTIVE DIRECTOR, URBAN TRANSPORTATION – Develops policies to recognize the needs and opportunities of urban communities and administers the Urban Transportation Program.

ASSISTANT DEPUTY MINISTER, ENGINEERING – Responsible for the provision of engineering standards and specifications, design, contract policy and administration, land acquisition standards and conveyancing, applied research co-ordination, and technical support for Transportation's roadway, bridge, airport and ancillary programs.

EXECUTIVE DIRECTOR, BRIDGE ENGINEERING – Responsible for the standards, direction, and performance of the department's bridge engineering, and for planning and delivery of the major bridge construction and maintenance programs.

DIRECTOR, PROPERTY SERVICES – Responsible for monitoring and acceptance of right-of-way purchase agreement and payments, initiation of expropriation procedures, managing land inventory, co-ordinating municipal road closure legislated requirements, and providing legal survey services for departmental programs.

EXECUTIVE DIRECTOR, ENGINEERING – Responsible for providing co-ordinated engineering standards and services for all departmental programs in the areas of contracts, design, materials, and research and development.

DIRECTOR, DESIGN ENGINEERING – Responsible for the development, application and monitoring of geometric design standards and the provision of design engineering services supporting all primary highway, secondary road and airport construction programs.

DIRECTOR, MATERIALS ENGINEERING – Responsible for providing a wide range of engineering, technical and administrative materials-related policies, standards and services and the application and monitoring of surfacing design standards for all departmental construction and maintenance programs.

DIRECTOR, CONTRACTS ENGINEERING – Responsible for contract administration policy, contract tendering and final payment auditing, settlement of third party and contractors' construction claims, administration of field project reviews and contract related engineering support services.

DIRECTOR, RESEARCH AND DEVELOPMENT – Responsible for co-ordinating applied research relating to the construction, maintenance and safe operation of the provincial transportation system.

ASSISTANT DEPUTY MINISTER, REGIONAL TRANSPORTATION – Provides senior direction in all aspects of construction programming and operations; budget/program preparation, financial control, and information preparation. Responsible for operation and maintenance of provincial highway system, airports, campsites, ferries, and improvement district road networks. Provides input and direction for short and long-range planning, and occupational health and safety.

REGIONAL DIRECTOR, LETHBRIDGE – Senior department representative in the region occupying the southernmost 150-250 kilometres of the province. Responsible for delivery of all Transportation programs. The prime contact with the public, municipal governments, private industry, and other government agencies in the region.

REGIONAL DIRECTOR, AIRDRIE – Senior department representative in the region extending west to British Columbia and the national parks boundaries from Saskatchewan, and north and south between the Fifth and Ninth Baselines. Responsible for delivery of all Transportation programs. The prime contact with the public, municipal governments, private industry, and other government agencies in the region.

REGIONAL DIRECTOR, RED DEER – Senior department representative in the region extending for 100-200 kilometres north and south across central Alberta. Responsible for delivery of all Transportation programs. The prime contact with the public, municipal governments, private industry, and other government agencies in the region.

REGIONAL DIRECTOR, ST. PAUL – Senior department representative in the northeast quadrant of the province. Responsible for the delivery of all Transportation programs. The prime contact with the public, municipal governments, private industry, and other government agencies in the region.

REGIONAL DIRECTOR, BARRHEAD – Senior department representative in the region west of Edmonton the national park boundary, and north to Swan Hills and Calling Lake. Responsible for delivery of all Transportation programs. The prime contact with the public, municipal governments, private industry, and other government agencies in the region.

REGIONAL DIRECTOR, PEACE RIVER – Senior department representative in the area north and west of Lesser Slave Lake. Responsible for the delivery of all Transportation programs. The prime contact with the public, municipal governments, private industry, and other government agencies in the region.

EXECUTIVE DIRECTOR, REGIONAL TRANSPORTATION – Supervises and directs the head office divisional staff to ensure efficient management of all departmental programs implemented in the six provincial regions. Conducts and directs information preparation on important division and department issues and policies.

DIRECTOR, CONSTRUCTION PROGRAMMING BRANCH – Directs the development, scheduling, preparation, and management of the department's annual capital construction programs, municipal grants programs, and related support services. Overall department responsibility for budget and financial control co-ordination.

DIRECTOR, OPERATIONS – Responsible for establishing maintenance standards, and preparation and control of maintenance budget. Ensures equitable distribution of maintenance funds to the regions. Provides guidance to regional staff on operational problems, policy direction and interpretation. Responsible for provincial skid resistance program, traffic safety installations, seeding programs, and oversees operation of campgrounds, rest areas and ferries.

DIRECTOR, AVIATION – Responsible for overall management of the Alberta Airport Development Program and establishment of maintenance standards for provincial airport facilities. Maintains liaison with other levels of government respecting aviation matters and provides aviation expertise for information requirements within and outside of the department.

MANAGER, OCCUPATIONAL HEALTH AND SAFETY – Responsible for development and management of the department's programs for occupational health and safety, employee safe use of vehicles and equipment, and safety on the worksite, such as construction zone safety.

ASSISTANT DEPUTY MINISTER, ADMINISTRATION – Responsible for the provision and operation of the various support services that are required for the operation of all divisions of the department. These include financial services, personnel management, information services, and the operation of the Transportation Revolving Fund.

EXECUTIVE DIRECTOR, UTILITIES ADMINISTRATIVE SERVICES – Responsible for administering the activities of Utilities component for personnel administration, financial administration, records and general services and Automation and Information Services.

EXECUTIVE DIRECTOR, FINANCIAL SERVICES – Responsible for the design implementation and control of all financial systems and transactions.

DIRECTOR, PERSONNEL MANAGEMENT – Responsible for recruitment, classification, payroll, benefits, labour relations, career and organizational development for department staff.

EXECUTIVE DIRECTOR, EQUIPMENT, SUPPLY AND SERVICES – Responsible for the procurement repair and maintenance of all equipment and the purchase and inventory of all material in the revolving fund. Responsible for departmental accommodation, reproduction, communication and mail.

DIRECTOR, INFORMATION SERVICES – Responsible for the design development, enhancement and operations of all computer based systems and the records management program for the department.

ASSISTANT DEPUTY MINISTER, UTILITIES DEVELOPMENT – Plans, develops, controls and directs the implementation of provincial policies and programs related to municipal water and sewage facilities, rural water transmission facilities, and rural and private utilities in the natural gas field, and recommends policy, program and legislative changes.

DIRECTOR, MUNICIPAL UTILITIES – Plans, directs, controls and evaluates the application of provincial policies and programs relating to the provision of financial assistance for municipal water and sewage facilities and farm water transmission systems. Recommends policy, program and legislative changes.

DIRECTOR, GAS ALBERTA – Responsible for the economic and efficient supply of natural gas to rural gas distributors throughout Alberta and for the provision of an optional customer retail billing service to rural distributors. Manages propane/fuel oil tank grants and utilities officer grant programs and provides other support services to rural gas co-operatives and fulfills the statutory duties of the Director of Rural Gas Co-operatives.

ASSISTANT DEPUTY MINISTER, UTILITIES PLANNING AND SUPPORT – Develops, plans and directs the provision of analysis and advice for Utilities' policies and the implementation of rural electrification, Gas Alberta and heating fuel rebate policies and programs.

DIRECTOR, UTILITIES PLANNING AND ANALYSIS – Responsible for providing analytical support and co-ordination for the development and evaluation of Utilities' policies, programs and planning activities.

DIRECTOR, RURAL ELECTRIC – Responsible for developing and delivering loan programs, for new farm electrical services and for REA capital rebuild. Manages grant programs to assist rural electrification in isolated areas and, in fulfilling the statutory duties of the Director of Rural Electrification Associations, provides regulatory, financial and other advisory services to REA's.

DIRECTOR, GAS DISTRIBUTION – Responsible for the administration of grants to rural gas distributors for the construction of natural gas systems. Provides technical, financial business advisory and regulatory services related to gas supply, pipeline construction, utility operation, gas measurement and franchise areas.

DIRECTOR, REBATES – Responsible for developing and delivering rebate programs as follows: the Natural Gas Price Protection Plan and Primary Agricultural Producers Rebate Program for natural gas, the Remote Area Heating Allowance Program for propane and fuel oil, and the Senior Citizens Home Heating Protection Program.

CONTENTS

Administration Division **1**
- Equipment, Supply and Services Branch 3
- Financial Services Branch 8
- Information Services 10
- Personnel Management Branch 12
- Transportation Revolving Fund 4
- Utilities Administrative Services Branch 14

Engineering Division **15**
- Bridge Engineering Branch 18
- Contracts Engineering Branch 20
- Design Engineering Branch 23
- Materials Engineering Branch 25
- Property Services Branch 27
- Research and Development Branch 28

Regional Transportation Division **30**
- Aviation Section 42
- Construction Programming Branch 33
- Occupational Health and Safety Section 39
- Operations Branch 40
- Regional Reports 44

Urban Transportation and Planning Division **51**
- Corporate Planning Services 53
- Operational Planning Branch 54
- Transportation Safety Branch 58
- Urban Transportation Branch 56

Alberta Motor Transport Board **59**

Motor Transport Services **61**
- Transport Field Operations Branch 63
- Transport Engineering Branch 64
- Support Services Branch 65
- Transportation Safety Branch 68
- Planning and Statistics Branch 70

Utilities Development Division **71**
- Gas Distribution Branch 73
- Municipal Utilities Branch 77

Utilities Planning and Support **79**
- Gas Alberta Branch 81
- Rebates Branch 83
- Rural Electric Branch 84
- Utilities Planning and Analysis Branch 80

Public Communications **86**

ADMINISTRATION DIVISION

D.A. McGeachy
Assistant Deputy Minister

Equipment, Supply and Services Branch 3
H. Wilson
Executive Director

Financial Services Branch 8
R.J. James
Executive Director

Information Services Branch 10
D.R. McTavish
Director

Personnel Management Branch 12
D.R. Learoyd
Director

Transportation Revolving Fund 4

Utilities Administrative Services Branch 14
E. Tywoniuk
Executive Director

The *Administration Division* provides support to all divisions of the department in the areas of equipment, supply and general services, finance, information services and personnel. The division is responsible for providing these services in a manner which efficiently and effectively enhances the delivery capability of those directly responsible for the services and products of the department. The division in providing this support is responsible for ensuring that all legislative and administrative policy requirements are met.

The Equipment, Supply and Services Branch through the department's Transportation Revolving Fund, acts as a centralized service and supply agency addressing requirements of the department's program branches.

Audited financial statements for the Transportation Revolving Fund for the year ended March 31, 1988 are shown on pages 5-7.

Equipment Management

The Transportation Revolving Fund owns and operates a fleet of mobile equipment employed by the program branches to discharge responsibilities in the construction and maintenance of roads, bridges, and airports within the provincial transportation network.

The major thrust during this period continued to be the matching of fleet size and mix to customer needs, resulting in maintaining the fleet size to last year's level. The emphasis on preventative maintenance ensured that fleet availability remained at a satisfactory level thereby supporting branches in meeting their operational goals.

Efforts toward the development of the Equipment Management System continued with the group's responsibility for data conversion and development of preventative maintenance criteria being the focus of activity.

The refinement of the engineered specifications for equipment acquisition was continued. This effort is an ongoing requirement to ensure the department's equipment needs are adequately met and supplier responsibility for after sale service and support is legally documented. Innovative equipment modification took place during this period in an effort to increase sand/plow truck capacity thus allowing for quicker reaction times to inclement weather conditions. Two examples of these endeavours are:

- quick change dump boxes, allowing for larger capacity hoppers
- pup-trailer mounted hopper sander, effectively doubling the capacity of a sander unit.

The department's surplus equipment was disposed of through public auction at local facilities throughout the province.

Shop Operations

The branch operates a network of 28 repair, maintenance and service facilities which:

- service, repair, overhaul, and maintain the department's equipment fleet
- provide customer service to program branches and other government departments on a cost-recovery basis.

The two primary facilities are located in Airdrie and Edmonton where operations include the manufacture of finished goods, fabrication of specialized requirements, and the overhaul and reconditioning of components and inventories.

The staff complement was reduced by five per cent by way of elimination of 20 positions which became vacant through attrition. Certain areas of light truck servicing, component rebuilding, and fabrication were discontinued with requirements being met by way of private sector suppliers. The purchase of signs from commercial firms was implemented as a pilot project in four districts. This endeavour resulted in approximately 7500 signs being purchased directly from the private sector.

Shop Operations is also responsible for the department's apprentice training program, which financed 118 apprentices in 1987/88. The majority were in heavy duty mechanic, welder, partsperson and machinist trades.

Stores Operations

As a result of the privatization of the previously noted shop activities, materials and parts inventories decreased. At the end of the year these inventories were valued at $14 million as compared to $16 million the year previous.

Stores Operations is currently involved in the development and installation of an Inventory/Purchasing module, which will form part of the Equipment Management System. Implementation should be completed in June 1988 and will provide improved stores information for all repair shops and central service facilities.

Support Services

The Support Services group is responsible for budget preparation, branch administrative services, facilities planning and departmental services. During the year progress was made on implementing a new branch records filing system as well as an administrative control system for departmental fixed assets. A new parking policy was introduced and plans for the move of Utilities staff to the Twin Atria Building were outlined. The Support Services group also introduced a departmental Paper Re-cycling Program.

ALBERTA LEGISLATURE

OFFICE OF THE AUDITOR GENERAL

Auditor's Report

To the Minister of Transportation and Utilities

I have examined the balance sheet of the Transportation Revolving Fund as at March 31, 1988 and the statements of operations and surplus and changes in financial position for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these financial statements present fairly the financial position of the Fund as at March 31, 1988 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Donald D. Salmon

C.A.
Auditor General

Edmonton, Alberta
June 22, 1988

STATEMENT A

BALANCE SHEET

As At March 31, 1988

	1988	1987
ASSETS		
Current:		
Accounts receivable	$ **15 628 547**	$ 9 894 285
Material inventories (Note 3)	**14 613 114**	17 678 344
Deferred gravel costs	**13 605 890**	30 345 087
Deferred land costs	**1 483 223**	9 075 775
	45 330 774	66 993 491
Fixed:		
Rental equipment	**95 938 929**	91 984 026
Accumulated depreciation	**59 276 537**	54 901 646
	$ **36 662 392**	$ 37 082 380
Deferred systems costs	**1 787 538**	349 750
	$ **83 780 704**	$ 104 425 621
LIABILITIES AND SURPLUS		
Current:		
Accounts payable and accrued liabilities	$ **4 895 048**	$ 4 584 571
Provincial Treasurer's advance	**70 938 979**	93 901 381
Surplus	**7 946 677**	5 939 669
	$ **83 780 704**	$ 104 425 621

The accompanying notes are part of these financial statements

STATEMENT B

STATEMENT OF OPERATIONS AND SURPLUS

For the Year Ended March 31, 1988

	1988	1987
REVENUE		
Rental revenue	$ **35 125 862**	$ 37 194 978
Material inventory sales	**21 390 723**	21 072 175
Shop labour	**1 008 266**	1 109 451
	57 524 851	59 376 604
EXPENSES		
Equipment maintenance and operating expenses	**21 362 512**	22 278 785
Cost of material inventory sales	**19 196 715**	18 870 759
Depreciation	**7 859 162**	8 167 766
Unapplied labour costs	**3 399 627**	2 620 600
Administrative expenses (Note 4)	**2 123 975**	2 224 325
Shop overhead	**1 441 375**	1 741 058
Inventory overhead	**822 350**	(299 453)
	56 205 716	55 603 840
	1 319 135	3 772 764
Gain on disposal of equipment	**687 873**	904 739
Net income (Loss) for the year	**2 007 008**	4 677 503
Surplus at beginning of the year	**5 939 669**	1 262 166
Surplus at end of the year	$ **7 946 677**	$ 5 939 669

STATEMENT C

STATEMENT OF CHANGES IN FINANCIAL POSITION

For the Year Ended March 31, 1988

	1988	1987
OPERATING ACTIVITIES		
Cash from operations		
Net income for the year	**$ 2 007 008**	$ 4 677 503
Net charges to income which do not affect cash		
Depreciation	**7 859 162**	8 167 766
Gain on disposal of equipment	**(687 873)**	(904 739)
	9 178 297	11 940 530
Changes in non-cash operating items		
(Increase) decrease in accounts receivable	**(5 734 262)**	7 129 455
Decrease (increase) in materials inventories	**3 065 230**	(1 023 427)
Increase (decrease) in accounts payable	**310 477**	(13 681 305)
	$ 6 819 742	$ 4 365 253
FINANCING ACTIVITIES		
Recovery of deferred gravel costs	**23 424 787**	5 788 269
Recovery of deferred land costs	**9 820 796**	2 805 495
Increase in deferred gravel costs	**(6 273 090)**	(8 362 871)
Increase in deferred land costs	**(2 640 744)**	(6 324 642)
	$ 24 331 749	$ (6 093 749)
INVESTMENT ACTIVITIES		
Proceeds from equipment disposals	**984 701**	1 506 404
Purchase of fixed assets	**(7 736 002)**	(12 864 792)
Systems costs	**(1 437 788)**	(349 750)
	(8 189 089)	(11 708 138)
DECREASE (INCREASE) IN PROVINCIAL TREASURER'S ADVANCE	**$ 22 962 402**	$ (13 436 634)

NOTES TO THE FINANCIAL STATEMENTS

March 31, 1988

NOTE 1 AUTHORITY

The Transportation Revolving Fund operates under the authority of the Department of Transportation and Utilities Act, Chapter D-30, Revised Statutes of Alberta 1980, as amended.

NOTE 2 SIGNIFICANT ACCOUNTING POLICIES

(a) MATERIAL INVENTORIES

Material inventories are valued at the lower of cost and net realizable value. Portions of lumber and petroleum product inventories are held by third parties.

(b) DEFERRED GRAVEL AND LAND COSTS

The Transportation Revolving Fund is used to finance the acquisition of gravel and land to be used by the Department of Transportation and Utilities. All expenditures made by the Fund for gravel and land are recorded as deferred costs and are recoverable from the department.

Deferred gravel costs are valued at cost less billings to the department.

Deferred land costs are valued at cost less recoveries from third party rentals.

(c) FIXED ASSETS

Fixed assets are recorded at cost.

Rental equipment is depreciated on a straight-line basis with the exception of 3/4 ton trucks which are depreciated on the basis of kilometres used. The approximate useful life of major equipment categories is as follows:

Light trucks	4 or 5 years
Heavy trucks	7 or 10 years
Graders, tractors, loaders, trailers and cranes	10 or 15 years

Shop equipment is depreciated on a 20 per cent declining balance.

(d) DEFERRED SYSTEMS COSTS

Costs relating to the Equipment Management System are deferred. These costs will be amortized commencing in the year that system development is completed.

NOTE 3 MATERIAL INVENTORIES

Material inventories are summarized as follows:

	1988	1987
Parts and supplies	**$ 11 815 694**	$ 14 612 623
Lumber	**1 997 606**	2 216 916
Work in progress	**423 567**	529 724
Petroleum products	**376 247**	319 081
	$ 14 613 114	$ 17 678 344

NOTE 4 ADMINISTRATIVE EXPENSES

Accommodation, repair shops, warehouse facilities, certain salaries and wages and other administrative expenses incurred in the administration of the Fund are borne by the General Revenue Fund. Accordingly, they are not reflected in these financial statements.

NOTE 5 COMPARATIVE FIGURES

The 1987 figures have been reclassified where necessary to conform to 1988 presentation.

NOTE 6 APPROVAL OF FINANCIAL STATEMENTS

These financial statements were approved by management.

The Financial Services Branch serves the department in a dual manner. Of foremost importance is the provision of timely relevant financial information to assist in the making of appropriate operational decisions. Of equal importance is the performance of a controller function aimed to ensure that financial policies, procedures and controls set departmentally, as well as those established at the broader government level, are adhered to.

To perform this role the branch provides expertise in the design, testing, implementation and management of financial accounting systems. An ongoing high priority is the development of annual and multi-year financial plans and the monitoring of the financial performance of the organization.

Highlights

The development of the automated Financial Reporting and Control System (FRACS) continued. Late in the fiscal year the second of four major modules, covering the processing and accounting for salary and wage costs, was implemented. This implementation provides for the direct entry of manpower utilization data from field offices. This data is in turn used by central payroll and accounting systems. With the completion of FRACS, expenditure information will be directly available to operating management on a more timely basis and at the level of detail appropriate to decisions being made.

The development of accounting records to facilitate conversion to the new government wide financial system, Central Financial System/Departmental Financial System (CFS/DFS) continued. Conversion is scheduled for late in the next fiscal year.

A restructuring of the Accounting Operations Section of the branch was undertaken coinciding with changes in functions and responsibilities as FRACS was implemented. Steps were commenced to merge the accounting units which existed in the Utilities and Transportation organizations. It is anticipated that further modifications in the organization structure of this branch will occur as the balance of FRACS and CFS/DFS is implemented. These changes are intended to make for a more responsive, effective financial support function in the department.

BUDGET ESTIMATES, SPECIAL WARRANTS, TRANSFERS AND EXPENDITURES CLASSIFIED BY VOTE GENERAL REVENUE FUND

Year Ended March 31, 1988

(in 000's)

		Budget Estimates	Special Warrants	Transfers	Total Authorization	Actual Expenditures
Vote 1	DEPARTMENTAL SUPPORT SERVICES					
	Executive Services -	$ 1 923	$ —	$ —	$ 1 923	$ 1 846
	Administrative Services -	12 958	—	—	12 958	12 126
		14 881	—	—	14 881	13 972

BUDGET ESTIMATES, SPECIAL WARRANTS, TRANSFERS AND EXPENDITURES CLASSIFIED BY VOTE GENERAL REVENUE FUND

Year Ended March 31, 1988

(in 000's)

		Budget Estimates	Special Warrants	Transfers	Total Authorization	Actual Expenditures
Vote 2	CONSTRUCTION AND OPERATION OF TRANSPORTATION SYSTEMS					
	Program support - Regional Transportation	41 632	—	(1 270)	40 362	39 774
	Improvement of primary highway system	202 993	4 400	—	207 393	207 404
	Improvement of rural-local highways	123 965	—	7 000	130 965	137 056
	Financial assistance for rural-local highways	40 126	—	—	40 126	40 088
	Maintenance of primary highway system	72 000	—	(200)	71 800	71 633
	Maintenance of rural-local highways	17 000	—	1 620	18 620	18 612
	Rural resource roads	40 000	1 000	—	41 000	40 587
	Pavement rehabilitation	41 000	—	(7 000)	34 000	33 878
	Construction and maintenance of airports	8 442	—	500	8 942	8 938
	Specialized transportation services	15 032	—	(500)	14 532	14 279
	Financial assistance for Urban Transportation	137 264	32 850	(150)	169 964	169 871
		739 454	38 250	—	777 704	782 120
Vote 3	CONSTRUCTION AND OPERATION OF RAILSYSTEMS	7 850	—	—	7 850	6 016
Vote 4	DEVELOPMENT AND SUPPORT OF UTILITIES SERVICES					
	Gas Utility Development and Support	20 749	—	—	20 749	16 888
	Gas Alberta	1 891	—	—	1 891	1 253
	Heating Fuel Rebates	14 137	—	—	14 137	12 692
	Electric Utility Development and Support	2 154	—	—	2 154	1 273
	Water and Sewer Utility Development and Support	53 702	—	—	53 702	52 497
	Individual Line Service Rebates	—	4 677	—	4 677	608
		92 633	4 677	—	97 310	85 211
Vote 5	ELECTRIC ENERGY MARKETING	19 176	—	—	19 176	15 553
		$ 873 994	$ 42 927	$ —	$ 916 921	$ 902 872

BUDGET ESTIMATES, SPECIAL WARRANTS, TRANSFERS AND EXPENDITURES CLASSIFIED BY CONTROL GROUP GENERAL REVENUE FUND

Year Ended March 31, 1988

(in 000's)

	Budget Estimates	Special Warrants	Transfers	Total Authorization	Actual Expenditures
Manpower	$ 127 042	$ 54	—	$ 127 096	$ 121 833
Supplies and Services	449 537	5 593	—	455 130	463 481
Grants	284 811	37 250	—	322 061	306 749
Fixed Assets	12 561	30	—	12 591	10 766
Other	43	—	—	43	43
	$ 873 994	$ 42 927	—	$ 916 921	$ 902 872
Operating	$ 208 592	$ 4 677	—	$ 213 609	$ 202 495
Capital	665 402	38 250	—	703 312	700 377
	$ 873 994	$ 42 927	—	$ 916 921	$ 902 872

REVENUE CLASSIFIED BY SOURCE

Year Ended March 31, 1988

(in 000's)

	1988	1987
PAYMENTS FROM GOVERNMENT OF CANADA		
Yellowhead Highway Improvement Program	**$ 5 000**	$ —
Other	**539**	230
	5 539	230
FEES, PERMITS & LICENCES		
Motor Transport Services	**4 740**	6 003
Airport Revenue	**199**	185
Road Allowance Leases	**11**	4
Snow Plowing Fees	**36**	19
Driver School/Instructor Licences	**—**	26
	4 986	6 237

OTHER REVENUE		
Investment Income		
Interest on Advances	**4**	2
Refunds of expenditures		
Refunds of prior year	**1 617**	3 563
Other	**129**	175
Sales of Assets		
Land	**93**	274
Other	**14**	6
Miscellaneous		
Rentals	**113**	619
Other	**116**	2 532
	2 086	7 171
Total Revenue	**$ 12 611**	$ 13 638

Information Services Branch develops, maintains and supports computer based systems for the department. The branch also provides word processing data entry and records management services and consists of the following sections:

- **Systems Planning** prepares department strategic and operational Electronic Data Processing (EDP) Plans. The section operates the Interactive Graphics System and an extensive data communications network as well as providing word processing and microcomputer support to the department
- **Engineering Systems** develops and supports systems for engineering and technical users
- **Administrative Systems** provides administrative systems development and support
- **Records Management Services** develops policies and procedures to manage the storage, access and disposal of departmental records.

The significant activities of the branch during 1987/88 include:

Systems Planning

The strategic information systems project was completed. This long term effort involved managers throughout the department and resulted in a number of recommendations which are now being implemented or considered for implementation:

- improvement of information availability by sharing data through department wide systems
- establishment of an EDP Steering Committee to assist in setting priorities and overseeing the development of department wide systems
- establishment of a data administration group to oversee the management of data as a departmental asset
- identification of appropriate technologies and resources to support the long term systems plan.

Highways Inventory System

Through this project, a database, which will serve as the single authoritative source of as-built road data, is being developed for use by staff across the department. Input, update and reporting software will be developed to support many departmental activities relying on this information. The first of eight phases (Project Initiation) was completed in May 1986. The second phase (Project Definition) and the third phase (Proposals For Solution) were completed in 1987/88.

Construction Programme Management System

The Construction Programme Management System (CPMS) project will replace a number of smaller systems with a major departmental database to provide an integrated source of construction project information to be shared by head office and regional staff. The first phase (Project Initiation) commenced in February 1988 and was completed in June 1988. CPMS will be developed in three releases with the first release planned for fiscal 1988/89.

Equipment Management System

Progress continued on the development of this major system which will enhance the management of the inventory and equipment fleet operated by the Equipment, Supply and Services Branch.

Financial Reporting and Control System

The second of this four module system was completed and implemented. It encompasses on-line input of salary, wage and private equipment and truck haul data into the Alberta Financial Information System. Design and development of the third module to interface with the provincial government's new Central Financial System began and is due to be on stream January 1989.

Permits Automation System

This system represents a co-operative effort between the Motor Transport Services Division and Alberta Solicitor General. Motor Transport Services will provide and use information from the Motor Vehicles System (MOVES) operated by the latter department. Significant progress was made in the design and development of this system that will automate the 'overload' and 'over-dimensional' permit issuing process. The system will also support all accounting elements for the carrier accounting system.

Gas Alberta Retail Billing System

This system will enhance the efficiency and quality of the optional retail billing service provided by the department to the rural natural gas distributors. It will make available revenue accounting, financial and historic installation data and generate invoices of gas volumes for customers. Documentation of requirements of the Gas Alberta Branch and of rural gas distributors was completed, along with the analysis of program design alternatives. From these alternatives a suitable software package will be developed.

National Safety Code System

The initial feature of this system, the Inter-Provincial Record Exchange project, was commenced. This system provides for exchange of vehicle and operator information between all provinces and territories. The project was the direct responsibility of the Alberta Solicitor General with participation and funding assistance provided by the department's Motor Transport Services. The system will implement the provisions of the National Safety Code which emphasizes safe operations of motor transport carriers. Direct access to expanded motor vehicle and carrier information will be provided from the Motor Vehicle System (MOVES) operated by Alberta Solicitor General.

Bridge Information and Management System

This system, which provides storage and retrieval of inspection information for all bridges on provincial roads, was upgraded to provide sufficiency ratings for single and multispan bridges. An enhancement to include culvert information was completed and new inspection forms were also developed.

Aggregate Sieve Analysis System

This system was developed to store and retrieve information and test results for all aggregate samples collected by the Transportation Laboratory.

Engineering Systems Upgrades

A number of engineering systems were upgraded to enhance engineering productivity by providing additional features. These include the Final Earthwork Quantities System, the Plot Preview System, the Truck Haul System and the Soils Classification System.

Microcomputers

Microcomputers are used for various engineering, technical, and administrative tasks within the department. These vary from word processing functions and spreadsheets to mainframe accessing and conveying of technical data on a province wide basis. In 1987/88 in response to requests for local area networks, a successful pilot project was undertaken and plans are underway to expand the use of networks to other branches.

Regional Network

Progress on upgrading and expanding our Regional Mohawk System Network continued. A new data communication network was installed to provide access from all repair shops to the Equipment Management System.

A network of graphic terminals and plotters was installed in all region and district offices. This equipment allows on-line preview and plotting of cross-section and alignment data generated by the engineering design systems.

Operations – Support

Data entry services, remote job entry facilities and interactive graphics continued to be provided to branches across the department.

During the year, data entry services were provided to branches for a total of 51 027 366 keystrokes. Interactive graphics facilities produced 10 902 maps and plans. Approximately 1065 user identification keys were maintained on the User I.D. System.

Word Processing

During 1987/88 minor hardware and software upgrades were acquired for the NBI word processing system as well as additional workstations and printers. As a direct result of the amalgamation of the Transportation and Utilities Departments three NBI workstations were added to the network. Facilities were provided to allow the integration of graphics and textual material.

Communication facilities were installed on the Motor Transport Services' NBI system in Red Deer to provide electronic document transfer with Edmonton headquarters. The system was also enhanced to provide access to the mainframe computers operated by Alberta Public Works, Supply and Services. An additional workstation and printer was installed on the Motor Transport system and in the Region Three office in Red Deer.

The Wang word processing system was upgraded with the installation of additional memory and a new operating system. To this system five workstations have been added.

Several memory typewriters were acquired, primarily for the regional and district offices.

Records Management

During the year Records Management Services transferred 5595 cubic feet of records to storage. A total of 860 cubic feet of records was destroyed or transferred to less expensive offsite facilities.

Analyses of record management requirements were completed for most of the region and district offices and filing system conversion projects are in progress in most of these areas. Similar services were provided to offices in the Edmonton headquarters.

The Personnel Management Branch experienced an active year in the delivery of its seven programs of:

- recruitment and selection
- classification
- pay and benefits administration
- employee relations
- organization development
- human resource information
- human resource planning.

There were several major changes which affected all sections of the branch namely:

- the transfer of the Highway Patrol employees from Alberta Solicitor General's department to Motor Transport Services
- administration of the Early Retirement Incentive Program (ERIP) which increased activities in each of our program areas
- the integration and relocation of the Utilities Department.

Organization Development

The Organization Development Section continued to address the training needs of the department through co-ordination of In House Training programs as well as support for training external to government.

Staff training and development activities are summarized as follows:

Training Program	No. of Participants
In House Courses	1725
Operations Training Program	650
Personnel Administration Office (Organization Development)	463
Outside Courses (Universities/others)	583
Public Works, Supply and Services (Computer, Records Management)	189
	3610

In addition to the training workload a great deal of support was provided by this section to the department's strategic planning activities. Progress was made in Human Resource Planning and a number of task forces were active in examining various Human Resource issues.

Employee Relations, Pay and Benefits

The Long Term Disability Program had a major policy change on November 1, 1987 which immediately affected all recipients. Also the number of Long Term Disability recipients was significantly reduced by the Early Retirement Incentive Program (ERIP).

There were: 59 recipients on April 1, 1987
21 recipients retired on ERIP
8 recipients returned to their job
2 recipients were placed in alternate jobs
2 recipients were unable to be placed in alternate jobs
49 recipients on March 31, 1988.

The pay and benefits and pension counselling activities were extremely active due to ERIP. In addition this section handled a variety of new assignments which included:

- introduction of the automated salaried and wages payroll system called Financial Review and Control System (FRACS). This new system modified that part of the role of the pay and benefits staff related to the verification of the monthly timesheets
- implementation of negotiated salary increases
- completion of the inputting of information into the Absent Time Reporting System
- a new computer access reporting system called Personnel Information Access System (PIAS) was introduced to the department. The PIAS reporting system accesses information maintained in two data bases — the Alberta Personnel Information system (APIX), a government wide personnel information system and the Alberta Financial Information System (AFIS).

The pay and benefits staff continued to handle a high level of activity generated by the employees' needs. The statistics below show the average number of employees and some of the related activities:

Average number of Wage Employees on Staff		1446
Average number of Permanent Employees on Staff		2585
Average number of Project Employees on Staff		365
Average number of documents manually processed monthly		3441
Percentage of Employees on Direct Deposit:	April 1/87	58%
	March 31/88	80%

We introduced to the department a computerized Personnel Information Reporting system and continued to co-ordinate the other computerized personnel information systems.

Personnel Services

The Personnel Consultants' activities in recruitment and selection, classification and employee relations almost doubled in comparison to the previous year's activity levels.

The hiring restriction which had been in place for most of the previous year was lifted with the advent of the core staffing concept. With the impending integration of Utilities and the retirements under ERIP, numerous classification and reorganization issues were resolved.

A major classification series review was undertaken with the amalgamation of the Transport Officers and Highway Patrol Officers duties. This resulted in a new classification series entitled Motor Transport Officers.

The following statistics outline the activities of the Personnel Consultants:

Staffing	
Number of Competitive Staffing Transactions	127
Number of Exemptions	76
	203
Classification	
Number of Classification Transactions	758
Employee Relations	
Number of grievances processed:	
Level 1	11
Level 2	5
Level 3	16
Level 4	13
	45

Special Employment Programs

Participation continued to be strong in supporting the special employment programs. Demands from managers were much higher than could be met. The following information indicates the number of people placed into temporary jobs through these programs.

	Number of Participants
Summer Temporary Employment Programs (STEP)	85
Priority Employment Program (PEP)	41
Employment Skills Program (ESP)	30
Co-op Program	—
Trades Apprentice Program	75
Enhanced Employment Skills Program (EESP)	1
Special Placement Program	1
Total Placements	233

The Utilities Administrative Services Branch provided support services to the Utilities component of the department. These services included Personnel, Finance, Records and General Services, Automation and Information Services.

The Personnel and Financial Services Sections continued to provide support services to the Utilities component. Planning for the amalgamation of these functions with similar components within Transportation was started.

Records Management and General Services were involved in providing Gas Alberta and Gas Co-op Support Services with records systems compatible to the rest of the Utilities program delivery areas. The results achieved significantly improved records management practices in these areas as well as reflecting a speedier and more efficient response to clients.

A presentation outlining computer processing alternatives available for Rural Gas Co-operatives was developed for the Utilities Energy Committee. Further details are outlined in the section entitled Information Services Branch.

ENGINEERING DIVISION

M A Kehr
Assistant Deputy Minister
G A Berdahl
Executive Director

Bridge Engineering Branch 18
N.M. Boyd
Executive Director

Contracts Engineering Branch 20
C.E. Shaul
Director

Design Engineering Branch 23
P.M. Evjen
Director

Materials Engineering Branch 25
L.W. Nichols
Director

Property Services Branch 27
P. Roche
Director

Research and Development Branch 28
J. Konarzewski
Director

The *Engineering Division* comprises six branches, each providing a functional support service to the roadway and airport construction and maintenance programs of the department. Overall responsibilities of the division include:

- engineering standards and specifications
- roadway and airport geometric and structural design
- bridge structural design, construction of major bridges and bridge maintenance standards
- construction contract tendering and contract administration policies and practice standards
- construction materials procurement and testing standards
- standards of right-of-way and land acquisition, legal survey and conveyancing
- development and co-ordination of applied research for all departmental programs
- engineering and technical support for all programs.

During the fiscal year, the heavy construction industry continued highly competitive bidding for the various types of work tendered by the department. This price competition, coupled with reduced materials costs, resulted in further reduction in the overall construction cost index by 14 percentage points over the previous year. Due to declining world crude oil prices, asphalt material purchase costs declined by approximately 23 per cent from the previous year's price levels. These cost reductions allowed additional construction projects to be undertaken within the department's budget appropriations. Engineering and technical support provided by the division accommodated the additional project load without staff increase through the continued use of private consultants and the increasing benefits of computerized engineering systems employed within the division.

In the reporting period End Product Specifications were developed for asphaltic paving contracts and three trial projects were tendered on this basis. This type of contract places responsibility upon the contractor for mix design, supply of all materials, construction and quality control engineering, and links final payment to final work quality received. Evaluation of this tendering method and further trial projects are expected in the ensuing year, and if successful, will result in increased pavement quality and a further degree of privatization of project engineering and materials purchase.

A major organizational thrust to facilitate the decentralization to regions and districts of the grading geometric design activity was undertaken in Design Engineering Branch, with associated training and implementation well along by the end of the reporting period. This provides more effective and efficient use of field engineering staff on a year-round basis and has resulted in a reduction in headquarters design staff complement.

The gradual transfer of the engineering design, contracting and project management functions for Secondary Roads Program projects to consulting firms engaged directly by municipalities and counties continued to progress on a voluntary basis, fulfilling both the goals of privatization and the alignment of these functions to the local authority having the roadway jurisdiction.

Bridge Engineering Branch continued to provide for Alberta Environment the engineering, contracting and construction support for bridge requirements associated with the Irrigation Headworks and Main Irrigation Systems Program funded by the Alberta Heritage Savings Trust Fund.

Individual reports of each of the branches of the division follow.

Bridge Engineering Branch provides bridge design, bridge construction, structural engineering and river engineering for departmental programs. Its services consist of preliminary engineering, detailed design, material acquisition, contract preparation, construction and liaison with regional bridge staff on all bridge-related matters. These functions of the branch are accomplished within five organizational sections: Bridge Planning, Bridge Design, Bridge Materials, Bridge Construction, and Bridge Services.

Services were supplied in four major program areas: primary highway bridge construction, secondary and local road bridge construction, primary highway bridge maintenance and secondary and local road bridge maintenance.

Bridge structures were designed and built to accommodate expansion and upgrading of the province's primary highway system. These structures ranged in size from 1500 millimetre diameter culverts to crossings of major rivers, such as the twinning of the Pembina River Bridge on Highway 16 east of Edson.

Work continued on a program to strengthen, or in some cases replace the weaker structures on the primary highway system to accommodate the increase in legal truck loadings to 62.5 tonne gross vehicle weight. This increase is a part of standardizing truck weights and configurations across Canada.

Design, construction and major reconstruction of bridges on local and secondary roads, again ranging from culverts to major structures, was also undertaken. During the year planning commenced for a major new crossing of the Peace River at the site of the Daishowa pulp mill north of the Town of Peace River.

Maintenance activities were provided for primary highways, secondary and local road bridges. Bridges were inspected, maintenance work planned and appropriate work performed. The computerized bridge inspection and maintenance system was developed further and staff were trained in its use. The program to restore and protect bridges from attack by de-icing salt has continued to expand in response to the need. The use of concrete sealers was expanded on both new construction and existing bridges. Thin epoxy overlays and membrane and asphalt systems were used to waterproof and protect bridge decks. Concrete reinforced with steel fibres was used as a tough deck overlay material. Fibre reinforced concrete was also used in shotcrete applications to restore areas of deteriorated concrete, and to reinforce existing corrugated metal culverts.

In addition to the major work performed in these areas under the direct responsibility of the Bridge Engineering Branch, engineering services were also provided for programs administered by other branches and departments. The branch was again assigned responsibility for the design and construction of new bridges related to the rehabilitation program for main canal systems in southern Alberta. Overall responsibility for this program belongs to Alberta Environment with funding by the Alberta Heritage Savings Trust Fund. Fourteen bridges were built under this program during this period. Branch staff also provided bridge engineering input into the administration of the department's Urban Transportation Program.

Major Bridge Construction Projects

NORTH SASKATCHEWAN RIVER, at Devon: In conjunction with upgrading of Highway 60 to a four-lane divided highway, construction continued on two new bridges for a four-lane facility through the river valley. One of the structures was opened to traffic in the fall of 1987 and the old steel truss bridge was removed.

McLEOD RIVER, near Edson: Construction started on a major new bridge across the McLeod River in conjunction with the multilaning of Highway 16. The divided four-lane facility will improve the safety and service for the high volume of traffic using this highway. The existing bridge will remain in service to carry westbound traffic.

WOLF CREEK, east of Edson: Multilaning of Highway 16 through this area included the twinning of the Wolf Creek bridge to carry eastbound traffic. The existing bridge will remain in service to carry westbound traffic.

SIMONETTE RIVER, south of Goodwin: A new concrete girder bridge was constructed on Secondary Road (SR) 734. This bridge replaces the through truss bridge that was destroyed in the extreme flooding caused by the unique storm associated with the 1987 tornados. The new open deck bridge will accommodate wider and heavier loads which will improve the safety of the crossing.

BEAVER RIVER, south of Grand Centre: Construction was started and well advanced on a new wider superstructure to upgrade the loading to current standards and to accommodate a left turn lane for the intersection immediately south of the bridge. The reconstructed bridge will allow heavier industrial loads and will improve the safety of the crossing.

LITTLE BOW RIVER, northwest of Carmangay: A higher and wider bridge was constructed on Highway 23 to replace the substandard concrete bridge constructed in 1950. This modern crossing will meet increased traffic demands and improve safety for motorists.

CASTLE RIVER, south of Burmis: The narrow steel truss on SR 507 was replaced with a modern three-span steel girder bridge. The new bridge will increase the road width and load capacity in conjunction with improving the substandard alignment through this area. The new crossing will improve the safety and convenience to the travelling public.

HAY RIVER AND SOUSA CREEK, west of High Level: In conjunction with an improved alignment joining Highway 58 and Zama Lake, new bridge crossings were started over Hay River and Sousa Creek. The new structures will accommodate heavy loads associated with the oil industry west of High Level.

EUREKA RIVER, south of Worsley: A large diameter concrete arch culvert was installed on SR 726 to replace the substandard timber and precast bridge. The crossing was reconstructed on an improved alignment that will better accommodate the movement of farm machinery and allow heavier loads.

BRAZEAU DAM POWER CANAL, southwest of Lodgepole on Sunchild Road: Sunchild Road is being developed as a major north-south arterial road which serves resource and recreation traffic between Rocky Mountain House and Lodgepole. Construction was started on a modern bridge across the canal in conjunction with improving the alignment through the Brazeau Dam development. The existing bridge, owned and maintained by Trans Alta Utilities will remain in service as part of the canal infrastructure.

PEMBINA RIVER, southeast of Barrhead: Construction of a new bridge was commenced on SR 654 to replace a narrow single lane steel truss bridge which restricted wide and heavy loads. The new bridge greatly improves this crossing by meeting modern bridge standards for Alberta's secondary road network.

BATTLE RIVER, north of New Norway: As part of continuing improvements to Highway 21 south of Camrose a new bridge was constructed over the Battle River. The wider bridge roadway and improved approach roads will contribute to increased safety for the motoring public.

GOOSE RIVER, southeast of Valleyview: Construction of a new bridge was started on SR 745 to replace a narrow single lane steel truss bridge. The new bridge meets modern bridge standards for Alberta's secondary road system and will better accommodate the movement of farm machinery and heavy industrial loads.

OTHER BRIDGE CONSTRUCTION PROJECTS

On Primary Highways

	HWY NO.	PROJECT	BRIDGE TYPE
River Bridges			
*	2	Mooney Creek, Slave Lake	Concrete girders
**	22	Elbow River, Cochrane	Steel girders
	28A	Thinlake River, Glendon	Concrete girders
	50	Parlby Creek, Mirror	Composite concrete/ SPCSP culvert
	63	Crow Creek, Wandering River	Composite concrete/ SPCSP culvert
	63	Hangingstone River, Ft. McMurray	Culvert repair
*	SR 940	Highwood River, Longview	Concrete girders
*	SR 940	Brown Creek, Nordegg	Concrete girders

Strengthening Program for 62.5 tonne loading:
6 River Bridges, 1 Grade Separation.

On Secondary and Local Roads

	HWY NO.	PROJECT	BRIDGE TYPE
River Bridges			
*	SR 505	St. Mary Dam Spillway	Salvage trusses and concrete girders
	SR 520	Trout Creek, Claresholm	Concrete girders
	SR 529	Travers Canal, BRID Headworks	Concrete girders
	SR 686	Lubicon River, Red Earth	Concrete girders
	SR 686	South Loon River, Red Earth	Concrete girders
**	SR 757	Paddle River, Sangudo	Steel girders
	Local	Battle River, Galahad	Salvage truss
	Local	Dogpound Creek, Harmattan	Strengthen truss
**	Local	James River, Sundre	Steel girders
**	Local	Little Red Deer River, Water Valley	Steel girders
**	Local	Medicine River, Benalto	Steel girders
**	Local	Rat Creek, Wadlin Lake Road	Relocation due washout
	Local	Rosebud River, Carstairs	Concrete arch culvert
**	Local	Wandering River, Breynat	Salvage truss
*	Sunchild Road	Brewster Creek, Rocky Mtn. House	Concrete arch culvert

Bridges over SMRID and LNID Canals, for Alberta Environment
12 Standard concrete girder bridges
1 Concrete box culvert
1 Salvage timber bridge

* Completed in 1987/88 but started in a prior year.
** Commenced in 1987/88 but carried over into following year.

Construction & Reconstruction of Standard Type Bridges

TYPE	PRIMARY HWYS	DISTRICT ROADS	TOTAL
Standard	5	38	43
Culvert	57	149	206
	62	187	249

Bridge Repairs

TYPE	PRIMARY HWYS	DISTRICT ROADS	TOTAL
Standard	32	206	238
Culvert	32	19	51
Major	87	137	224
	151	362	513

Contracts Engineering Branch is responsible for:

- development and upgrading of contract specifications
- preparation, tendering and administration of contracts for the construction of primary highways, secondary roads, roads to provincial parks, approach roads, airports and miscellaneous projects
- assessment of contractors' claims and recommendations on the resolution of claims
- management of the Primary Highway Lighting Program
- development of the schedule of rental rates for construction equipment
- co-ordination of environmental and archaeological management activities
- administration of construction material supply and procurement
- conducting engineering and final details audits
- engineering consultant selection and agreements.

The branch consists of four sections: Contracts Administration, Construction Claims and Standards, Environmental Management and Materials Purchasing and Administration.

Following are the highlights of the work accomplished by the branch during this reporting period.

Contracts Administration

Contracts Administration Section prepared and called tenders on 187 construction contracts during 1987/88. Included in this total are 129 contracts for grading, base and paving, 27 for gravel crushing, nine for traffic signals, lighting and painting, and 22 contracts for other types of work including sewer contracts for the Utilities Division. Three paving contracts were tendered using the new End Product Specification. The value of all the contracts, which generally do not include materials costs, was approximately $170 million.

In addition to the contracts noted above, the branch was involved in the administration of seven contracts arising from invitational tenders put out by the districts or other branches.

Manuals of updated Standard Specifications were distributed to department staff, consultants working for the department and other agencies. A manual of specifications and guidelines was developed for the use of municipalities and their consultants for grading of secondary roads.

In answer to a need for formal contracts for small local road grading projects in Improvement Districts, specifications and contract documents were produced for use in the 1988 construction season.

In conjunction with the regionalization of grading design, assistance was given to Design Engineering Branch staff in a major training program for district designers, regarding input required for contract preparation. Key special provision clauses were updated and circulated.

The specification review committee updated 11 of the standard construction specifications and developed new ones for painted roadway markings and traffic control systems.

Contract administration procedures included checking all tenders, processing 14 contract extensions with a value of $1 125 000, processing 150 letters of credit valued at almost $15 million, processing 82 subcontract approvals, processing 30 contract unit price approvals and making 23 applications to Alberta Treasury to increase contract commitments by a total of almost $3 million.

Final payment estimates prepared by district staff were audited for all contracts to ensure that contract payments were according to the contract and department policy. Contractual final clearances were obtained and releases of holdback and letters of credit authorized. Third party claims under the Public Works Act and contract terms were handled.

Construction records were maintained, and unit price and costs indexes were calculated. Reports were prepared on construction and other details of the highway system.

Construction Claims and Standards

Construction Claims and Standards Section, in conjunction with other branches and regional staff, developed 47 agreements with engineering consultants for engineering studies, surveys, designs and contract supervision of roadway and airport projects and with architectural consultants for rest area design and construction services.

The department's annual Schedule of Rental Rates for Construction Equipment was updated to include newer equipment models, updated serial numbers, minor revisions and increases for specific equipment. Rate reductions were imposed on equipment older than 1983 models.

The internal engineering project review program was continued whereby a team, including experienced staff from other branches and districts, reviewed various projects throughout the province to ensure engineering excellence through uniformity of contract interpretation and project management, and adequacy of and compliance with design standards. Six projects were reviewed during this year.

This section was also responsible for the assessment of contractors' claims pertaining to various roadway and airport construction contracts, and for the negotiation of equitable settlements. The majority of claims were resolved through consultation and negotiation between contractor representatives and departmental staff. There were no claims requiring mediation or litigation.

Roadway lighting installations under the Primary Highway Lighting Program were completed at 34 new sites and 32 existing systems were modified. Over 40 per cent of these projects were in urban areas involving cost-sharing arrangements whereby local municipalities were responsible for the operating costs.

The installation of the new system at the Eckville access from Highway 11 completes the department's program to ensure that every town in the Province of Alberta has its primary highway access illuminated. Furthermore, the replacement of wood poles with steel and retrofitting the streetlights to high pressure sodium at the south end of Carstairs completes another program that was initiated in 1982. All highway lighting systems that are the direct responsibility of the department now consist of steel poles and operate at the lowest available maintenance cost.

The detailed listing of the highway lighting projects are listed in the table on this page and on page 22.

Environmental Management

The department's two environmental management sections were amalgamated into one, which remained in the Contracts Engineering Branch. The amalgamation will provide total environmental management services including route planning, design, construction and post-construction monitoring of sensitive areas along highways.

All grading designs were reviewed and referred to other pertinent government agencies. Special provisions were developed for contract documents as required. Design adjustments and remedial measures were recommended to reduce potential environmental problems on several projects.

All preliminary surveys, grading projects and gravel sources were referred to the Archaeological Survey Branch of Alberta Culture and Multiculturalism, who carried out Historical Resources Impact Assessments. Three developments required major archaeological mitigation and excavation.

Liaison was maintained with Air Quality Branch of Alberta Environment for monitoring the emissions of all asphalt mixing plants on department projects. Recycle asphalt plant locations were evaluated for environmental problems and special provisions were placed in contracts where required.

Construction projects were monitored to ensure compliance with provisions for protection of wildlife and fisheries habitat. Ongoing operational monitoring was carried out on 300 kilometres of major roads in Kananaskis Country and sections of SR 734 and Highway 40 between Grande Prairie and Grande Cache.

Department representation and input was provided to the Biotechnical Erosion Control Project, Fishways Working Group, Alberta Environment and the Fish Habitat Protection Committee, a joint committee of the department and Alberta Forestry, Lands and Wildlife.

Material Purchasing and Administration

A total of 750 purchase orders, valued at $81 million was placed for highway construction materials.

Liaison with the Purchasing Branch, highway contractors, District Transportation Engineers, Project Managers and suppliers continued, resulting in little or no delay or project shutdown due to materials delivery.

An additional $4 million of drainage and fencing material was detailed to highway construction projects from the department's central service facilities at Edmonton and Airdrie.

Accounts payable functions were carried out for two highway construction camps as well as Contracts, Materials and Design Engineering branches.

Bonding, insurance policies and final signatures were obtained for 187 construction contracts.

PRIMARY HIGHWAY LIGHTING PROJECTS
DETAILED SUMMARY OF LIGHTING PROJECTS

New Lighting Systems

Highways Through Towns and Villages

HIGHWAY	THROUGH	REMARKS
Alberta Transportation Systems		
25	Shaughnessy	
Municipal Systems Cost-Shared		
2A	Blackfalds	
2A	Lacombe	
11 & 20	Sylvan Lake	
16	Entwistle	New pedestrian underpass
16A	Entwistle	
22	Mayerthorpe	
25	Picture Butte	
22 & 27	Sundre	Continuous lighting systems on both highways
36	Lac La Biche	
38	Redwater	
41	La Corey	Bonnyville Municipal District
44	Westlock	
58	Rainbow Lake	

Approach Road Intersections To Towns and Villages

HWY	ACCESS TO	REMARKS
11	Eckville	
11	Benalto	
22	Bragg Creek	
23	Champion	
28	Radway	
37	Onoway	North access
43	Little Smoky	
45	Marwayne	
49	Eaglesham	

At-Grade Intersections

JUNCTION	LOCATION	REMARKS
1 & 101 St.	2 km W. of Calgary	Olympic venue access
2A & SR 597	S. of Blackfalds	Intersection alignment
21 & 27	S. of Equity	Intersection improvement
22 & 22X	E. of Priddis	Four-lane construction
22 & SR 620	S. of Drayton Valley	
23 & SR 520	E. of Claresholm	

Interchanges

HWY	LOCATION	REMARKS
2	2 & SR 597, W. of Blackfalds	Partial lighting at off ramps
2	Morinville	Four-lane construction
16	Wabamun	Partial lighting at off ramps

Highways Through Indian Reserves

JUNCTION	RESERVE	REMARK
2A & SR 611	Hobbema	Intersection improvement

MODIFICATIONS TO EXISTING SYSTEMS

Highways Through Towns and Villages

HWY	THROUGH	REMARKS
Alberta Transportation Systems		
2A	Carstairs	Replaced wood pole system
16	Hinton, W. of Switzer Drive	Four-lane construction
43	Whitecourt	Highway realignment
Municipal Systems cost-shared		
1	Bassano	Old Highway 1, operation costs transferred to town
2	Airdrie	Operation costs transferred to city
2	Hythe	System extended, operation costs transferred to village
2A	Okotoks	System extended, operation costs transferred to town
2A	Lacombe	System extended to accommodate new truck bypass
11 & 20	Sylvan Lake	Intersection reconstruction
12	Lacombe	System extended to accommodate new truck bypass
16	Hinton, Switzer Dr. Underpass	Four-lane construction
18	Westlock	Replaced wood pole system
25	Picture Butte Infill	Stage Two of project
28	Cold Lake	System retrofitted and extended, operation costs transferred to town
41	Elk Point	Highway reconstruction
55	Lac La Biche	System retrofitted and extended

Approach Roads to Towns and Villages

HWY	ACCESS TO	REMARKS
11	Sylvan Lake	South access, new highway construction
16	Evansburg	Four-lane construction
43	Sangudo	Central access reconstruction

At-Grade Intersections

JUNCTION	LOCATION	REMARKS
2A & 7	N. of Aldersyde	New highway alignment
11 & SR 596	W. of Red Deer	Intersection improvement
12 & 39	Alsike Corner	Intersection improvement
43		S. of Blueridge divided highway transition

Interchanges

HWY	LOCATION	REMARKS
2 & 22X	S. of Calgary	New loop construction
2	Airdrie	Median widening
2 & 2A	S. of Red Deer	New ramp connection and highway realignment
2	Edmonton Int. Airport	Partial lighting extension
14	Sherwood Park Freeway	July 31, 1987 tornado restoration
16 & 22	Entwistle	New interchange and Four-lane construction
16A		E. of Edmonton, July 31, 1987 tornado restoration

Alberta Transportation Roadside Development

HIGHWAY	LOCATION	REMARKS
2	Balzac Vehicle Inspection Station	Site reconstruction
43	Whitecourt Vehicle Inspection Station	Yard expansion

Design Engineering Branch is responsible for providing the following services for all primary highway, secondary road, airport and ancillary road construction program projects:

- preparation of information for preliminary surveys and right-of-way requests
- development and monitoring of geometric design and drafting standards
- provision of detailed geometric design and drafting services
- grading program recommendations
- provision of computerized earthwork design quantities and preparation of contract design packages
- co-ordination of utility relocations, and development of detailed project construction schedules for contract provisions
- co-ordination and design of traffic signing for highway intersections
- administration of primary highway designations
- co-ordination and management of computerized design and earthwork final quantity processing systems including co-ordination and management of computer database storage and retrieval files for departmental graphics, survey and roadway design data
- training of design, drafting and field personnel in computerized and earthwork applications.

Highlights of the work accomplished during the reporting period follow.

Roadway Design

Roadway Design Section is responsible for developing and maintaining geometric design standards, preparing right-of-way and preliminary survey requests, co-ordinating the ordering and delivery of construction materials, and performing or co-ordinating the detailed geometric design of all grading projects.

During the 1987/88 fiscal year detailed preliminary survey instructions for 51 projects totalling 416 kilometres were provided to Regional Transportation Division. These projects included multilane freeways and expressways with their associated loops, ramps and service roads as well as rural, arterial, collector and local roads.

During this period, 850 kilometres of cross-section data notes were reduced by computer and then plotted by the calcomp plotter to a reduced scale convenient for design purposes and field use. In addition soil data edit was completed for all grading projects and data was transferred to the Transportation Interactive Graphics System for plots.

In October 1987 an executive decision was made to develop a comprehensive plan to decentralize feasible roadway design activities to the regions/districts. This plan was completed early in 1988 and plan implementation resulted in completion of 40 design projects by region/district staff. The scope of duties in Roadway Design Section was expanded in 1987/88 fiscal year to accommodate the implementation of the grading design decentralization plan. As part of the plan the section completed a "Geometric Design Reference Manual" and held four, two week training sessions on geometric design to provide training to 50 project managers.

In summary Roadway Design Section designed 63 projects, co-ordinated and checked the design of eight projects commissioned to engineering consultants, and provided support to field staff on their design projects. In total the section completed the detailed design of 71 primary and secondary road projects totalling 709 kilometres in length.

Utilities and Planning

Utilities and Planning Section is responsible for co-ordinating utility relocation/accommodation and for removal of other physical encumbrances to facilitate timely construction of roadways. In addition this section initiates and develops contract special provisions for grading projects, co-ordinates all phases of work carried out on vehicle inspection stations, arranges for railway crossing agreements, establishes utility drafting standards, prepares all utility plans, and co-ordinates high load corridor projects.

During this reporting period 12 railway crossing agreements were obtained and contract special provisions were prepared for 53 grading projects tendered by the department, including the development of detailed project construction schedules.

Accommodation or relocation was arranged and co-ordinated for 425 pipelines, 295 kilometres of powerlines, and 365 kilometres of telephone cables. More than 320 detailed pipeline crossing plans were prepared and agreements were concluded for each.

Along Highway 60 in the Devon area, $3 500 000 of utilities relocations and adjustments were completed involving 60 pipelines and major powerlines.

Relevant utility regulations and codes were reviewed and necessary recommendations for amendments were made to the Energy Resources Conservation Board, the National Energy Board and the Canadian Standards Association.

Also during this reporting period this section co-ordinated the planning and design of a Vehicle Inspection Shed in Leduc, drilling of a new water well and installation of a new septic system at the Cochrane Vehicle Inspection Station and yard improvements at another seven stations.

The High Load Corridor pilot project and the Nisku West Extension (Highway 21, SR 625 and Highway 19 to Highway 60) were completed. This now provides free movement of high loads from Calgary and Edmonton to Cold Lake and Fort McMurray. The High Load Corridor now covers a total of 1150 kilometres of the highway system.

A follow-up High Load Corridor five year program was established for its commencement in 1988.

Design Support

Design Support Section manages and provides training on computerized design systems, computer graphics systems, and the final earthwork quantities system. Computerized and conventional drafting services are also provided in support of the department's many programs.

Approximately 3000 engineering plans were prepared for preliminary surveys, right-of-way acquisition, airport and roadway design, specialized equipment design, contract tendering, construction and maintenance purposes.

The final earthwork quantities computer system (FEQS) was used to generate information on 121 roadway and two airport grading projects. In total processing was finalized on 56 projects covering a total of 958 kilometres. A new release (Number Three) of FEQS was tested.

During this period 38 "Electronic Fieldbook" data collectors were used by district fieldstaff on 43 grading projects and 25 preliminary surveys. These devices helped to expedite data entry for more than 475 kilometres of survey cross-section by transferring information over telephone lines to the central data processing facilities in Edmonton. A new release of the "Electronic Fieldbook" was also being tested.

Design Support staff also provided the following technical training and assistance:

- thirty-two district staff were trained to use electronic fieldbooks for collecting and transmitting survey data
- fifty-three staff were trained to use ICES ROADS for the design of roads
- updating was commenced on the FEQS Training Manual and the Design Engineering Branch (DEB) Menu Systems Manual.

Special Projects

The Special Projects Section is responsible for provincial and community airport conceptual planning and design, vehicle inspection station building design and construction delivery, primary and secondary highway signing design and field liaison, and primary highway designation order preparation.

Since the completion of the bulk of new airport construction, emphasis in the airport program has shifted to rehabilitation and enhancement. Typically this work includes asphaltic pavement improvement, slurry seal coat work, drainage improvement, runway lighting modification, runway painting marking, taxiway upgrading, and runway lengthening. Six existing airports (Whitecourt, Hardisty, Consort, Drumheller, Vermilion and Cooking Lake) received upgrading to varying degrees.

The section co-ordinated private engineering consultants in the finalization of the new Red Earth Airport contract plans, and the High Level Air Terminal Building site developments (parking lot, sidewalks, area lighting and landscaping). It also co-ordinated two architectural consultants in the construction delivery of the High Level Air Terminal Building and the Radway Vehicle Inspection Station. Work on the Leduc Vehicle Inspection Shed was also advanced by evolving three conceptual designs. An engineering and architectural firm was engaged and design drawings and specifications were developed by the year end.

One primary highway designation amendment order was completed and gazetted under Alberta Regulation 531/87, effective January 1, 1988. This very large amendment included 117 highway designation sheets that were prepared for portions of 20 primary highways. As well, all signing designs for new intersections and interchanges identified on the highway program were drafted and completed as required.

Materials Engineering Branch is responsible for providing management, engineering and technical services and standards for aggregates, surfacing, geotechnical matters and materials testing.

Some of these services include:

- supply and management of aggregate materials
- structural design of road and airport bases and pavements
- testing and quality control standards
- laboratory materials testing and pavement mix design service
- pavement inventory, performance monitoring, design standards, and surfacing program recommendations
- geotechnical engineering for landslides, foundations, subsurface drainage and erosion control
- training of department personnel in materials testing
- support for the department's construction and maintenance programs.

Administration

The branch organization remained unchanged from the previous year and carried essentially the same duties and responsibilities. Staff and budget levels were again reduced slightly, but with increased efficiency, innovation and accelerated use of computerized data processing, essential levels of engineering services were maintained.

Development continued on the departmental strategic business plan which resulted in improved communication and more efficient use of human resources. Engineering services provided to the various programs continued at previous levels with increased emphasis on priority requirements. Major efforts were expended on improved quality of construction.

Aggregates Services

Aggregates Services Section is responsible for managing the aggregate supplies required for the department's construction and maintenance programs. This includes the location, sampling, assessment, acquisition and allocation of aggregates and the provision of aggregate-related specifications, and recommendations and standards for aggregate source reclamation.

During the year, 11 aggregate prospecting crews and one consultant located approximately 22.4 million cubic metres of gravel and 1.8 million cubic metres of sand.

A detailed assessment of aggregate sources was provided for 114 projects to determine the best blend of local aggregates appropriate to produce high quality pavements at reasonable cost.

Additional responsibilities included needs assessment and programming for winter gravel stockpiling, and maintenance of standards and specifications covering pit operations and reclamation.

Geotechnical Services

Geotechnical Services Section is responsible for providing geotechnical investigation, analysis and design services and standards for the planning, design, construction and maintenance of roadways, airports and bridges.

During the past year, six field crews investigated 21 bridge foundation sites and 113 preliminary roadway and airport soil survey sites. In addition the section provided inspections and engineering services for five horizontal drilling sites, seven landslide investigations and six significant trenching projects. This included about 23 000 metres of drilling and 4000 metres of trenching.

Private drilling companies provided rental equipment for the total drilling program. Seven private engineering consulting firms were employed on 31 of the field projects.

Geotechnical investigation relating to the site selection and design of the approach roads to the new Peace River Bridge north of the Town of Peace River was a major achievement during this reporting period. Geotechnical staff spent a considerable amount of time and effort on this very large project.

Surfacing Services

Surfacing Section is responsible for establishing roadway surfacing design standards and procedures, and for providing designs for the department's primary highway, secondary road and airport surfacing programs. Pavement rehabilitation and seal coat programs are recommended, based on continuous monitoring and evaluation of the system pavement inventory.

Other section responsibilities include: preparation of specifications for surfacing materials and construction; initiation of orders for asphalt, Portland Cement and other stabilizing agents, provision of technical and professional assistance and advice with respect to surfacing matters and continuous assessment of the quality being achieved on all department surfacing projects.

During the year, the pavement evaluation unit continued to gather information on the strength, smoothness, visual condition and skid resistance of existing roadway and airfield pavements for rehabilitation and reconstruction programming and design purposes.

Six Benkleman Beam crews conducted 56 884 tests on 3242 kilometres of roadway. One Dynaflect crew performed 11 610 tests on 655 kilometres of roadway and one airport. Two high speed roadmeter crews measured the smoothness of 16 998 kilometres of roadway. Two pavement condition rating crews rated 2656 kilometres of roadway. Friction testing was performed on 9917 kilometres of paved roadway and about 4800 metres of bridge deck.

Special investigations were carried out on subgrades and pavements for design purposes. These investigations required 84 metres of coring on 19 projects and 241 metres of drilling and sampling on five projects.

Sixty-four frost probes, nine of which were newly installed in the reporting period, continued to be monitored and maintained in support of seasonal road ban protection of the highway system.

The quality monitoring unit received, stored, analyzed and interpreted quality control data from 67 base and paving projects. This unit provided a summary evaluation of the quality of 1987 surfacing construction, and assisted in updating specifications, training construction staff and performing various construction-related research activities.

The surfacing design unit developed 311 surfacing designs, with quantity and cost estimates, for preparation of 174 contract design packages, consisting of: 17 district crushing, 13 seal coat crushing, 24 first course gravel surfacing, 30 granular base course, eight cement stabilized base course, 18 combined base course and paving, 47 asphalt concrete paving, five reclaim and recycle paving, six seal coat and six miscellaneous projects. The unit also developed the department's seal coat program and prepared 19 chip washing and 37 chip application estimates for the department's seal coat camp operations involving over 1400 lane-kilometres of roadway.

Testing Services

Testing Services Section, through the Transportation Laboratory, is responsible for providing services and standards for materials and quality control testing, mix design, materials inspector training and certification, test equipment supply, and evaluation of new materials and processes.

The Transportation Laboratory performed more than 50 000 tests on approximately 23 000 samples of soil, aggregate, asphalt, paint and other construction and maintenance materials. One hundred and forty-eight mix designs and investigations were performed on asphalt and cement stabilized base and pavement materials.

Ten materials training courses were presented to 192 technologists and project managers, involving 67 course days and 919 man-days of training. Field materials manuals continued to be updated as revisions and additions became necessary. A total of 300 manuals were distributed to course participants, regional offices and consultants.

The field services unit visited construction projects to monitor and assist with plant calibrations, testing procedures, quality control and testing problems. Technical assistance was provided to the department Project Review Committee on six projects.

During this fiscal year, the special projects unit continued its investigations into many products by means of laboratory investigation and/or trial projects. Work was advanced on recycling emissions, rutting, blend sands, reinforcement of cracks, polymer modified asphalt, roller compacted concrete, aggregate modification, lime stabilization, segregation, new paving equipment and pavement reinforcement with geotechnical grid materials. Other significant research work involved indepth studies on low temperature cracking and performance of full depth pavement.

The testing laboratory equipment unit supplied 523 field test kits to field construction projects throughout the province. Inventories and repairs to existing testing equipment were maintained.

The Property Services Branch is responsible for policy development and standards for land acquisition and management, and the integrity of the department's land holdings.

More particularly the branch is responsible for:

- establishing provincial standards for right-of-way negotiation, purchase and management
- monitoring and accepting agreements negotiated by regional property agents
- reviewing and clearing encumbrances prior to payment for right-of-way
- administering expropriation proceedings under the Expropriation Act
- legally surveying and registering land acquired for transportation facilities
- processing bylaws and applications for road closure or cancellation pursuant to the Public Highways Development Act, the Municipal Government Act, and the Land Titles Act
- managing documentation related to payments in lieu of municipal taxes and department ownership of property.

The functional areas of the branch were comprised of the following:

Right-of-way Requests

Approximately 140 right-of-way requests were enhanced with details of ownership and area requirements and forwarded to regional property managers to enable negotiations with land owners.

Negotiation

In co-operation with the regional property managers and agents, the branch assisted with negotiations, monitored land values throughout the province, and determined acceptability of purchase agreements for payment. A total of 900 agreements were reviewed and accepted.

Appraisal

A total of 42 independent appraisals were commissioned from companies throughout the province as aids to negotiation or as required by the Expropriation Act.

Expropriation

During the year four new expropriations were commenced and four agreements were signed under Section 30 of the Expropriation Act. The following table summarizes this activity:

Expropriations carried over	Full	24
	Section 30	26
New expropriations	Full	4
	Section 30	4
Expropriations finalized	Full	14
	Section 30	12

Compensation

The following payments were approved for a total of $5 907 244:

	Current Funding	Stock Advance Fund	Land Purchase Fund
Primary highways and secondary roads	$ 2 405 932	$ 2 579 539	$ 208 438
District Roads	702 685	—	—
Airports	10 650	—	—
	$ 3 119 267	$ 2 579 539	$ 208 438

To facilitate highway planning, negotiations and clearance of encumbrances, 16 000 title searches were made in Edmonton and 8800 in Calgary.

Property Management

Administration of department lands is summarized as follows:

Leases (136) (Revenue)	$ 160 000
Taxes (Paid to Municipalities)	51 706
Grants in lieu of taxes	403 670

Legal Surveys

During the reporting period, 248 legal surveys were completed for land required for transportation facilities. Of these, 125 were commissioned to surveyors in the private sector involving 58 different surveyors for a total cost of $468 837.

Metis Settlements

As a result of proposed new Metis Settlement legislation, the branch undertook an extensive review of the road networks within the settlement areas and arranged to complete all legal surveys necessary to provide for public roadways.

Conveyancing

This procedure represents the last step in the title changes and involves careful checking and finally the transfer of title.

A total of 216 road plans were registered.

Titles received	60
Notifications to Registrar cancelling roads	445
Letters of abandonment	42

Road Closures

A total of 165 municipal bylaws were reviewed and prepared for the Minister's signature allowing municipalities to close roads for public travel, lease or sale.

Research and Development Branch primarily focuses on practical and applied research aimed directly at improving development, maintenance and operation of the transportation physical plant (highways, roads, bridges and airports) and departmental equipment. The role of the branch is to:

- pursue opportunities for co-operative research with other agencies according to departmental needs
- co-ordinate all departmental research to ensure it is designed, documented and followed through according to a scientific approach
- avoid duplication of research effort throughout the department
- ensure dissemination of research results
- undertake certain research projects directly.

The branch is the primary departmental contact and co-ordinator for related research activities on an international, national, provincial and local level. The research program encompassed five main areas:

- Canadian Strategic Highway Research Program (C-SHRP)
- Council of Highway and Transportation Research and Development (CHTRD) Program
- Alberta Research Council Cooperative Research Program
- University Cooperative Research Program
- Departmental Research Program.

Canadian Strategic Highway Research Program (C-SHRP)

C-SHRP is a $5 million program jointly funded by all the provincial governments and the Federal Government, aimed at maximizing the benefits to Canada of the United States $150 million Strategic Highway Research Program (SHRP). C-SHRP consists of four sub programs:

- monitoring the SHRP program in the United States
- technology transfer of SHRP findings to Canada
- a co-operative Integral Program with SHRP
- Complementary Program for uniquely Canadian problems.

The branch has provided representation to the C-SHRP Executive and Technical Steering Committees and other areas of the department have provided representation to the Asphalt, Long Term Pavement Performance and Bridge and Structures Advisory Committees. The first visiting researcher to the SHRP program in Washington was selected from the department for a one year term. Numerous pavement test sections in Alberta have been submitted to SHRP for inclusion in the Integral Program.

Alberta Research Council Cooperative Research Program

This program is jointly funded by the department and Alberta Research Council and addresses specific problems predominantly related to pavements, bridges and their associated environments. The following were conducted during the year:

- pavement management systems research
- pavement design and evaluation research
- geotechnical and materials evaluation research
- research into performance of pavement bituminous materials
- paving of aggregate roads research
- river bank protection research
- ice forces on bridge piers research
- collection of data to produce regionalized flood frequency curves for Alberta.

Council of Highway and Transportation Research and Development Program (CHTRD)

The CHTRD Program is conducted through the Roads and Transportation Association of Canada (RTAC) and is jointly funded by all the provincial governments, the Federal Government and private industry. The research conducted and financially supported under this program consisted of:

- pavement conditioning rating system development
- heavy vehicle configuration optimization (HEVECO)
- bridge capacity assessment under variations in axle spacing and heavy vehicle configuration
- salt use management for water resource protection
- Loran-C coverage in Canada for aircraft navigation
- fare collection systems and equipment
- economic impact of heavy vehicle weights and dimensions
- economic impacts of road investment
- two-lane rural highway capacity and level of service (phase III)
- computer software inventory update
- economics of premium quality pavements
- adapting the Brazil UNDP road costs research to Canadian conditions
- development of design and operational guideline for the 'B' convertor dolly.

University Cooperative Research Program

Under this program the Universities of Alberta and Calgary conducted research for the department through post-graduate theses or direct contracts. The following research was conducted:

- influence of asphalt cement properties on the high temperature performance of pavements in Alberta
- rehabilitation of full depth asphalt concrete pavements in Alberta
- Devon geogrid test fill research
- research into bolted joints of corrugated steel culverts
- planning and design of passing lanes (simulation)
- research into the use of silica fume in concrete materials
- linear traverse analysis of in service bridge structures.

Departmental Research Program

Under this program the Research and Development Branch undertakes certain high priority research using its own resources or in combination with other departmental branches, regions, districts or private sector resources.

During this reporting year, the branch completed a further 34 research projects and published 29 research reports. Twenty-seven new projects were undertaken as follows:

Safety and Equipment Research

- development of a temperature monitoring system for paint machines
- standards for halogen lights for snow plows
- evaluation of grader blade systems
- field verification of automated equipment measuring accuracy
- shoulder warning devices for snow plows
- evaluation of Falling Weight Deflectometer
- investigation of traffic control standards for Benkleman Beam operation
- comparison of automated roughness measuring equipment
- evaluation of tandem axle sanding truck/pup trailer sander combination
- computerized compaction control
- investigation of underbody snow plows
- evaluation of vehicle tracking system for use in barrier line placement
- automated measurement of highway cracking
- evaluation of equipment for asphalt microtexture measurement
- evaluation of differential mode recorders
- snow plow shoe study.

Materials and Operations Research

- evaluation of various pavement cracksealer materials
- river bank protection research
- roadway location referencing system
- use of de-icing chemicals on bridge decks
- development of application rates of salt/sand mixtures
- vegetation of adverse sites
- laboratory evaluation of polymer membrane systems for bridge deck repairs
- preventative maintenance of asphalt surfaces on bridge decks
- methods of detecting the moisture content of bridge decks
- evaluation of experimental barriers for erosion control
- evaluation of alternative road repair mixes.

Transportation Library

The department Library continued to provide information services to all branches, regions and districts of the department, to other provincial government agencies, and to members of the public with an interest in or need for transportation research information. Services included:

- answering 'quick' and indepth requests for information
- keeping department staff up-to-date with an average of 80 articles per month through the current information scanning services (April through August only)
- purchasing publications and subscriptions for all areas of the department
- circulating over 5400 publications, including numerous items borrowed from or loaned to different North American libraries and information centres.

In addition, as part of the reference and research service, library staff conducted 350 literature searches on various computerized databank services with access to information worldwide. Of particular use were the Transportation Research Information Service (TRIS) database sponsored by the U.S. Transportation Research Board, and International Road Research Documentation (IRRD), developed by the Road Research Unit of the Organization on Economic Cooperation and Development (OECD).

The major initiative for the library in 1987/88 was to begin to automate the library operations of cataloguing, acquisitions, serials check-in, and circulation with the new computer system installed in March 1987. Starting in July 1987, all new items indexed for the library collections were entered in the catalogue database, which allowed for much greater speed and accuracy when searching for information. Using the flexible output capabilities of the system, library staff designed various reports, improved the format of the library bulletins and prepared a number of revised publication lists, including a list of Research and Development Branch reports and audio visual items in the Career Resource Centre. Work progressed as well on the acquisitions and serials' databases. With the help of temporary employment programs, bibliographic information for over 600 journal titles was verified and entered by the end of March in preparation for online serials check-in.

Library staff continued to play an active role in the library community, participating in the Alberta Government Libraries' Council, an interdepartmental committee, and the Transportation Division of the Special Libraries Association, an international organization of over 11 000 information specialists. Also, demonstrations of the library's integrated computer system were held for many local libraries.

REGIONAL TRANSPORTATION DIVISION

N. Chorney
Assistant Deputy Minister
J.A. Glowach
Executive Director

Aviation Section

42

T. Watt
Director

Construction Programming Branch

33

C.D. Burton
Director

Occupational Health and Safety Section

39

C. Kopeck
Manager

Operations Branch

40

G.E. Vincent
Director

Regional Directors

44

Southern Region No. 1
R. Comchi
South Central Region No. 2
B.W. Kathol
Central Region No. 3
D.J. Bussard
North East Region No. 4
H. Hetu
North West Region No. 5
C. Lendzion
Peace Region No. 6
P.J. Sawchuk

The *Regional Transportation Division* is responsible for the development, scheduling and fiscal control of the major construction programs together with management and field implementation of the construction and maintenance of the provincial transportation system. The division is comprised of the Construction Programming Branch, Operations Branch, the Aviation Section and the Occupational Health and Safety Section, with the field implementation handled by six regional directors located in strategic centres throughout the province.

Specifically, the division is responsible for the programming, management and field delivery of the following elements:

- regional administration
- construction programming
- construction and maintenance of:
    - primary highways
    - approach roads
    - forestry roads
    - improvement district roads
- construction of:
    - tourism resource roads
    - vehicle inspection stations
    - secondary roads
    - resource roads improvement program
    - pavement rehabilitation
    - provincial airport facilities
    - community airport facilities
- construction, maintenance and operation of ferries
- maintenance and operation of forestry airstrips
- grants to counties and municipal districts
- grants to towns and villages – street assistance
- grants to Special Areas
- Public Transportation Operating Assistance Grant
- Improvement District Trust Account Program
- maintenance and operation of provincial air facilities.

Under the construction programs, improvements were made to approximately 2437 kilometres of roadways, and maintenance operations were performed on approximately 37 916 kilometres of roadway under the primary highway and improvement district programs.

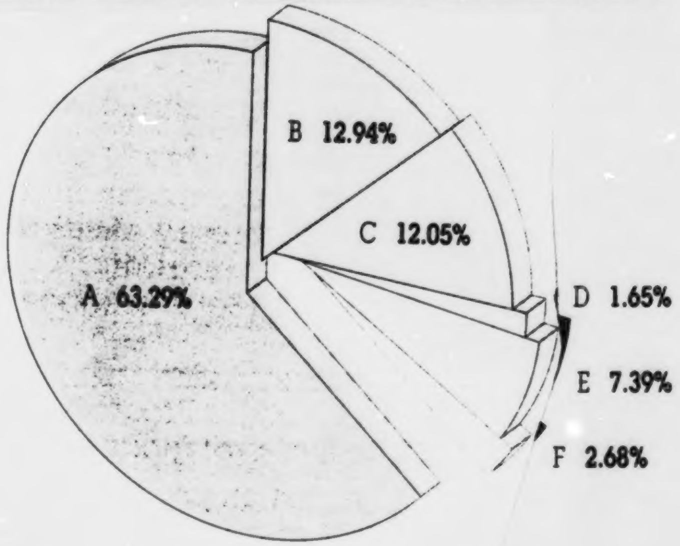
Between April 1, 1987 and March 31, 1988 the following materials were used in contract construction work on provincial primary highways, secondary roads, airports, approach roads, and provincial park roads:

First course gravel surfacing	854 000t
Granular base course and asphalt stabilized base course	4 724 656t
Cement stabilized base course (sand)	423 735t
Asphalt concrete pavement gravel	3 160 629t
Skid resistant surface gravel	172 257t
Recycled asphalt pavement	372 040t
Total asphalt used	245 000t
Total cement used	24 700t

Regional Transportation Division staff continued to work closely with the various municipal and improvement district councils and local people in dealing with and resolving local transportation concerns.

An analysis of Regional Transportation's total expenditures, by major categories of activity is shown below. Details of the work undertaken by Regional Transportation's branches are reported on the pages which follow.

1987/88
REGIONAL TRANSPORTATION EXPENDITURES



A. Major construction of primary highways, secondary, approach, park, and resource roads; pavement rehabilitation: 63.29%
B. Maintenance of highways and ferries: 12.94%
C. Construction and maintenance of improvement district roads: 12.05%
D. Construction and maintenance of airports and airstrips: 1.65%
E. Grants to counties, municipal districts, towns, villages and special areas: 7.39%
F. Regional administration: 2.68%

The responsibilities of the Construction Programming Branch include analysis of budget requirements, priorization and development of the department's road construction programs, scheduling and delivery of the construction programs, control of the associated budget components and programming, development and management of all grant programs.

The work is handled by three sections: Program Development, Program Management and Municipal Services.

Program Development

This section is responsible for system and budget analysis, program development and advance scheduling of the following major capital programs:

- Primary Highways Construction Program
- Pavement Rehabilitation Program
- Secondary Roads Program
- Resource Road Improvement Program
- Ring roads and inter-city connections
- Approach Roads Construction Program
- Park Roads Construction Program
- Tourism Resource Roads Program
- Highways 1 and 16 Four-Lane (twinning) Program.

This section is also responsible for advance program co-ordination of the primary highway construction schedule, the bridge construction program, and the Vehicle Inspection Station Program.

Program Management

The Program Management Section is responsible for the management and delivery, within budget, of the following programs:

- construction of:
  - primary highways (including the twinning program for Highways 1 and 16)
  - approach roads
  - tourism resource roads
  - vehicle inspection stations
  - secondary roads
  - provincial and community airports
  - improvement of resource roads
  - pavement rehabilitation.

To ensure delivery of the construction programs, the section co-ordinates, schedules and manages interdepartmental engineering activities, monitors engineering and construction activities and progress, maintains expenditure control to ensure delivery within budget and liaises with outside agencies.

Additional responsibilities include analysis of industry capability and provision of support services to the Regional Transportation Division, and contractor liaison as necessary for timely delivery of construction programs.

Construction of Primary Highways

The main emphasis of the primary highways construction programs continues to be the upgrading of older highways, the strengthening of existing pavement structures, and the extension of the graded and paved network to meet the transportation demands associated with industrial, commercial, agricultural, commuter and tourist traffic throughout the province.

Multilaning of the highly congested routes continued to be a priority and construction was completed during the reporting period on:

- Highway 1, east of Highway 56 to north of Bassano
- Highway 1, north of Lathom to east of Southesk
- Highway 2, north of Aldersyde to north of Sheep River
- Highway 16, junction Highway 15 to west of Vegreville
- Highway 16, Hinton to east of Hinton
- Highway 16, Wildwood to east of Entwistle.

Construction was commenced on:

- Highway 1, east of Suffield to junction SR 524
- Highway 2, north Stavely to Nanton
- Highway 16, east of Hinton to west of Obed
- Highway 16, east of Edson to east of junction Highway 32
- Highway 16, east of Vegreville to east of Highway 36
- Highway 16X, west of Vegreville to east of Vegreville
- Highway 22X, junction Highway 22 to west of Highway 2
- Highway 60, south of junction Highway 19 to junction SR 627.

Widening of the four-lane highway between Airdrie and Red Deer designed to improve the safety of this highway commenced with the following projects:

- Highway 2, north of Airdrie to south of Crossfield
- Highway 2, south of Highway 54 to south of Penhold Interchange.

Street and roadway improvements were undertaken on 10 primary highways through 15 cities, towns or villages. These projects were designed and supervised by consulting engineering firms working for the cities, towns or villages under the terms of an agreement with the department. Of these, three were carried over from 1986/87 and two were carried into 1988/89.

During the reporting period construction was completed on 762.44 route-kilometres of which 113.66 kilometres were constructed under the twinning program. This included the extension of new paved surfaces on 257.39 kilometres.

Expenditures for primary highway construction totalled $178 855 729. The different types of work undertaken by kilometre were:

	REGULAR PROGRAM	TWINNING PROGRAM HIGHWAYS 1 & 16
Grade	205.27	80.53
Granular base course	223.71	79.59
Asphalt stabilized base course	66.55	14.10
Cement stabilized base course	3.85	—
Asphalt surface	418.55	121.02
Recycled asphalt pavement	98.69	11.94
Preliminary engineering	216.93	110.59
Skid resistant surface	432.89	28.94
Street improvement	0.56	—
Consulting Engineering	58.75	28.79
Gravel	65.57	—
Reclaimed asphaltic pavement	65.44	—
Total task-kilometres	1856.76	475.50

Construction of Approach Roads

Construction of approach roads to towns, villages and hamlets located near primary highway and secondary highway routes continued to be co-ordinated with major projects in the area. Access projects to 17 communities were under way during 1987/88; four were carried over from 1986/87, four will be completed in 1988/89. Construction affected 23.73 kilometres. Expenditures totalled $2 396 224.

The different types of work undertaken by kilometre were:

Grade	8.11
Granular base course	1.07
Asphalt stabilized base course	5.21
Cement stabilized base course	4.16
Asphalt surface	11.04
Preliminary engineering	14.85
Skid resistant surface	14.57
Gravel	10.30
Total task-kilometres	69.31

Construction of Tourism Resource Roads

A total of 32.18 route-kilometres of road were constructed to provincial parks for an expenditure of $1 996 644.

Major projects included completion of base course to Willow Creek Provincial Park; grading to Bonnie Lake and commencement of grading on the Red Coat Trail south of Manyberries; base course from the Lethbridge North Irrigation District Canal to Head Smashed In Buffalo Jump Provincial Park; base course and paving to Wizard Lake and the Twelve Foot Davis monument; final pavement to Carson-Pegasus and Calling Lake Provincial Parks and grading, base and paving of the Heritage Ranch Park Rest Area at Red Deer.

The different types of work undertaken by kilometre were:

Grade	13.41
Granular base course	12.88
Asphalt stabilized base course	2.20
Asphalt surface	9.87
Preliminary engineering	13.01
Dust abatement	72.90
Seal Coat Application	9.49
Consulting Engineering	5.40
Total task-kilometres	139.16

Construction of Vehicle Inspection Stations

The Vehicle Inspection Station Program involves the construction of entrance, exit, bypass lanes, parking areas, buildings and site development for these facilities.

Expenditures totalled $75 713.

Construction of Secondary Roads

Secondary road network improvements continued to be a major priority with county, municipal district, special areas, towns, villages and improvement district councils. Improvements in the various construction categories were undertaken on 816.49 route-kilometres of secondary roads.

Improvements were made to secondary roads through three towns and villages. This work was directed by consulting engineering firms working for the urban municipalities under agreement with the department.

One project was performed under an agreement with Keyano College, as a training program for equipment operators under actual field conditions.

Expenditure for the Secondary Road Program totalled $84 726 314. The different types of work undertaken by kilometre were:

Grade	363.45
Granular base course	195.88
Asphalt stabilized base course	216.23
Cement stabilized base course	55.81
Asphalt surface	234.70
Preliminary engineering	518.76
Dust abatement	8.05
Skid resistant surface	206.77
Street improvement	5.10
Construction engineering	14.90
Gravel	68.06
Total task-kilometres	1887.71

Improvement of Resource Roads

The demand continued, during this reporting period, for improvements to roads impacted by resource traffic. High standard roads were constructed to expedite the operation of resource and industrial traffic on a year round basis and to reduce the impact on surrounding roads in a particular area.

Three projects were undertaken by towns and villages under the terms of an agreement with the department. The preliminary engineering, design and project supervision were performed by consulting engineering firms.

Improvements were made to 415.80 route-kilometres of road for a total expenditure of $40 586 697.

The different types of work undertaken by kilometre were:

Grade	264.46
Granular base course	86.16
Asphalt stabilized base course	73.67
Cement stabilized base course	36.35
Asphalt surface	90.40
Preliminary engineering	202.73
Skid resistant surface	55.33
Construction engineering	6.73
Gravel	67.07
Total task-kilometres	882.90

Pavement Rehabilitation

Increased traffic volumes, heavier loading, an aging pavement system and highly fluctuating seasonal temperatures (as experienced throughout Alberta in recent years) has increased the severity of stress on the province's paved highways. Many of the older pavements require restoration, repair and strengthening. To protect the existing investment and structural integrity of the pavement structures, a program of pavement rehabilitation was continued and significant progress was made in restoring these older pavements to a rejuvenated condition.

During the past year, four projects included recycling of existing asphaltic pavement in areas where raw aggregates are in short supply.

Pavement rehabilitation was undertaken on 385.97 route-kilometres of highways at a total cost of $33 877 870.

The different types of work undertaken by kilometre were:

Granular base course	16.66
Asphalt surface	387.12
Recycled asphalt concrete pavement	51.85
Reclaimed asphalt pavement	75.02
Street improvement	7.80
Total task-kilometres	538.45

Airport Construction: Provincial and Community Airports

Among the major activities in the Provincial Airport Program was the installation of a new airfield lighting system at High Level and the completion of paving at Red Earth. The new High Level Air Terminal building was also completed.

The Community Airport Program saw the installation of a new airfield lighting system at Beaverlodge.

Slurry seals were applied on five airports as part of a pavement rehabilitation initiative to preserve the investment in existing airports.

Expenditures incurred in the development of airport facilities totalled $6 416 479.

CONSTRUCTION OF PROVINCIAL AIRPORT FACILITIES

Expenditures for 1987/88

AIRPORT LOCATION	TYPE OF WORK	TOTAL EXPENDITURES
Cooking Lake	Taxiway Paving & Drainage	$ 282 554
Fort Chipewyan	Microwave Landing System	350 996
Fort Vermilion	Lighting	481
Fox Creek	Paving	33 523
High Level	Air Terminal Building	263 092
High Level	Air Terminal Building Site Development	571 664
High Level	Airport Access Road	24 645
High Level	Microwave Landing System Installation	69 684
Medley	Equipment Shelter	9 185
Red Earth	Paving	1 887 128
Red Earth	Lighting	29 471
Slave Lake	Taxiway repairs	10 799
Whitecourt	Development area clearing, grading	39 603
Head Office	Distance measuring equipment purchase	960 000
Head Office	Non-directional beacon hardware purchase and installation	415 454
Head Office	Automated weather observation system hardware purchase	188 031
Head Office	Architectural design of High Level Air Terminal Building	72 044
		$ 5 208 335

CONSTRUCTION OF COMMUNITY AIRPORT FACILITIES

Expenditures for 1987/88

AIRPORT LOCATION	TYPE OF WORK	TOTAL EXPENDITURES
Bashaw	Site Clean-up	$ 10 202
Beaverlodge	Lighting	17 924
Brooks	Drainage	1 666
Brooks	Lighting	38 672
Canmore	Heliport Grant	30 000
Forestburg	Landscaping and Site Clean-up	4 264
Valleyview	Compensation - Airport R/W	10 650
Head Office	Purchase and install radio control runway lighting units	39 690
Head Office	Grant to Alberta Aviation Council	20 389
Head Office	Seeding	10 246
Head Office	Purchase runway lighting hardware	38 786
Head Office	Runway marking	1 037
		$ 223 525

RUNWAY PAVEMENT REHABILITATION

Expenditures for 1987/88

AIRPORT LOCATION	TYPE OF WORK	TOTAL EXPENDITURES
Consort	Slurry Seal	$ 57 859
Drumheller	Slurry Seal	75 092
Fort Vermilion	Pavement Overlay	310 319
Hardisty	Slurry Seal	58 508
Killam-Sedgewick	Drainage	21 090
Whitecourt	Pavement Overlay	357 038
Valleyview	Pavement Repairs	30 007
Vermilion	Slurry Seal	74 689
		$ 984 602

Municipal Services

The Municipal Services Section is responsible for the planning, program development and management of the following construction and maintenance programs within the improvement districts:

- improvement district road construction
- improvement district road maintenance
- improvement district trust account
- forestry road construction and maintenance.

The section also administers and monitors grant programs for towns, villages and rural municipalities. During the reporting period these programs involved:

- grants to counties and municipal districts
- grants to special areas
- street assistance to towns and villages
- engineering assistance program
- Public Transportation Operating Assistance Grant Program.

Additionally, Municipal Services liaises with other government departments and agencies, as well as interdepartmentally, to effect the necessary approvals and agreements for construction projects in these programs.

Improvement District Construction

A total of $17 248 915 was expended on capital construction projects on local and secondary roads within 15 improvement districts during the reporting period.

An additional amount of $6 497 803 was provided for construction of access and internal roads under the Indian Reserve and Metis Settlement Access Program.

The Public Lands Division of Alberta Energy and Natural Resources continued to open up new lands for settlement during this period. At a cost of $1 755 823, 54.7 kilometres of access roads were constructed. This initiative was further enhanced during this reporting period, with the continuation of the Roads to Existing Farmlands Without Access Program. A total of $1 795 755 was expended to construct 72.6 kilometres of access road in this regard.

Nine improvement district hamlets benefited from the Hamlet Streets Assistance Program resulting in an expenditure of $328 527 on road and street improvements.

Improvement District Maintenance

There are 19 736.43 kilometres of secondary and local roads in improvement districts, and 439.3 kilometres of public roads within Indian Reserves. These roads required an expenditure of $14 246 205 for the summer and winter maintenance operations.

Improvement District Trust Account

Alberta Municipal Affairs provided the department with $20 113 301 from tax revenues for transportation projects in the improvement districts.

The work undertaken with trust funds on improvement district roads by kilometre was:

Grade	141.9
Gravel	3882.8
Dust abatement	74.1
	4098.5

Construction and Maintenance of Forestry Roads

An expenditure of $3 350 373 was incurred on the construction and maintenance of 3611.75 kilometres of forestry roads. The projects undertaken were established through consultation with the Alberta Forest Service Branch of Alberta Energy and Natural Resources.

Grants to Counties and Municipal Districts

The program provides grants to 30 counties and 20 municipal districts for construction and upgrading projects and related works.

The program is divided into four major sub-programs: Regular Road Grants, Dust Control Grants, Special Grants and the Hamlet Streets Assistance Grants. The expenditure breakdown for each category was:

Regular Road Grant	$ 23 209 199
Dust Control Grant	2 503 589
Special Grant	2 486 183
Hamlet Streets Assistance Grant	699 617
	$ 28 898 588

Grants to Special Areas

The department provided a regular grant of $1 482 000 to the Special Areas Board to assist with required capital road construction projects within Special Areas 2, 3 and 4.

Alberta Municipal Affairs is the road authority for Special Areas. Forces under the direction of the Special Areas Board undertake road construction. This grant is based upon a formula which takes into account road mileages, population, terrain factors of the region and equalized assessments.

Engineering Assistance Program

This program provided $703 045 to counties, municipal districts and special areas for the required engineering work associated with their Regular Road Grant projects. The amount allotted is based on the level of the municipalities Regular Road Grant allocation. This grant is used to engage private engineering consultants or to cover engineering services provided by Alberta Transportation and Utilities.

Street Assistance in Towns and Villages

The current five year street assistance program was commenced on April 1, 1984. The program provided $9 004 736 in the 1987/88 fiscal year for towns, villages and summer villages, for a total of 108 approved projects. Each municipality is eligible to receive their full entitlement once during the five year period. The program is designed as a cost-share initiative.

Public Transportation Operating Assistance Grant

The Public Transportation Operating Assistance Program was implemented April 1, 1979, and the program was renewed on April 1, 1985 for three years to March 31, 1988. The program provides assistance for senior citizens, the disabled and the handicapped in the development of specialized transportation services and/or, the subsidization or upgrading of the existing transportation services in a municipality.

The $2.94 per capita grant funding in 1987/88 was distributed as follows:

Towns	$ 898 215
Villages	137 285
Counties	647 554
Municipal Districts	319 876
Improvement Districts	171 437
Special Areas	17 582
	$ 2 191 949

Improvement Districts

IMPROVEMENT DISTRICT	TRUST FUNDS	MAINTENANCE	CONSTRUCTION	FORESTRY ROADS
5	$ 56 000	$ 625 374	$ —	$ 555 507
6	315 000	256 296	46 893	134 374
7	65 403	54 781	215 617	—
8	182 000	456 141	238 563	296 597
MD 99	—	42 915	—	601 598
14	3 350 000	1 342 962	1 411 324	202 972
15	1 657 000	431 646	613 440	84 617
16	2 625 000	1 015 351	1 046 712	564 279
17	3 509 939	3 297 127	5 255 046	300 455
18	3 954 050	1 856 078	2 103 099	143 620
19	585 000	610 987	1 877 937	—
20	964 659	639 804	2 184 460	—
21	765 000	916 556	1 966 725	39 651
22	965 000	1 247 423	1 729 057	410 899
23	1 119 250	850 462	2 391 750	20 804
222	—	—	48 397	—
	$ 20 113 301	$ 13 643 903	$ 21 129 020	$ 3 350 373

Indian Reserves

DISTRICT	TRUST FUNDS	MAINTENANCE	CONSTRUCTION	FORESTRY ROADS
2	—	115 838	1 233 584	—
4	—	163 577	663 883	—
6	—	75 865	839 669	—
7	—	24 587	—	—
9	—	3 997	—	—
11	—	88 336	1 298 962	—
12	—	111 253	1 324 197	—
13	—	9 851	795 272	—
14	—	8 354	84 516	—
15	—	644	257 720	—
	—	602 304	6 497 803	—
	$ 20 113 301	$ 14 246 205	$ 27 626 823	$ 3 350 373

GRANTS TO COUNTIES AND MUNICIPAL DISTRICTS

Expenditures for 1987/88 fiscal year

COUNTY	EXPENDITURES
Athabasca	$ 1 219 276
Barrhead	677 045
Beaver	503 417
Camrose	558 942
Flagstaff	608 332
Forty Mile	1 020 616
Grande Prairie	952 590
Lac Ste. Anne	592 723
Lacombe	430 231
Lamont	427 071
Leduc	600 457
Lethbridge	635 575
Minburn	474 966
Mountain View	497 584
Newell	610 780
Paintearth	352 886
Parkland	826 378
Ponoka	549 482
Red Deer	630 973
St. Paul	699 547
Smoky Lake	469 395
Stettler	569 760
Strathcona	516 125
Two Hills	442 000
Thorhild	648 299
Vermilion River	703 642
Vulcan	694 814
Warner	967 488
Wetaskiwin	521 486
Wheatland	486 485
MUNICIPAL DISTRICT	**EXPENDITURES**
Acadia	145 302
Bonnyville	605 947
Cardston	436 654
Clearwater	646 110
Cypress	635 149
Fairview	236 164
Foothills	496 405
Kneehill	663 649
Peace	146 193
Pincher Creek	239 315
Provost	433 430
Rocky View	664 007
Smoky River	735 917
Spirit River	179 451
Starland	378 109
Sturgeon	541 705
Taber	676 582
Wainwright	583 927
Westlock	805 018
Willow Creek	661 189
Special Areas 2, 3 & 4	100 000
	$ 28 898 588

ENGINEERING SUPPORT

1987/88 fiscal year

COUNTY	EXPENDITURES
Athabasca	$ 17 476
Barrhead	906
Beaver	13 580
Camrose	15 520
Flagstaff	15 520
Forty Mile	22 014
Grande Prairie	21 425
Lacombe	18 137
Lac Ste. Anne	16 490
Lamont	10 670
Leduc	15 520
Lethbridge	13 158
Minburn	7 817
Mountain View	13 580
Newell	13 410
Paintearth	10 092
Parkland	20 370
Ponoka	14 550
Red Deer	16 490
St. Paul	15 520
Smoky Lake	12 610
Stettler	16 490
Strathcona	10 670
Two Hills	11 640
Thorhild	10 078
Vermilion River	19 400
Vulcan	19 631
Warner	10 690
Wetaskiwin	8 209
Wheatland	13 580
MUNICIPAL DISTRICT	**EXPENDITURES**
Acadia	3 880
Bonnyville	12 610
Cardston	3 095
Clearwater	12 610
Cypress	14 509
Fairview	—
Foothills	14 550
Kneehill	13 987
Peace	16 001
Pincher Creek	7 823
Provost	10 670
Rocky View	18 430
Smoky River	16 490
Spirit River	—
Starland	11 656
Sturgeon	15 520
Taber	18 357
Wainwright	10 670
Westlock	16 897
Willow Creek	15 873
Special Areas 2, 3 & 4	44 174
	$ 703 044

STREET ASSISTANCE IN TOWNS AND VILLAGES

1987/88 fiscal year

TOWNS & VILLAGES	EXPENDITURES
Alberta Beach	$ 96 863
Alix	91 428
Alliance	61 640
Amisk	62 360
Andrew	90 520
Barons	10 846
Barrhead	51 048
Betula Beach	12 288
Bonnyville	20 040
Breton	87 720
Brooks	1 250 394
Calmar	137 800
Canmore	43 839
Carbon	23 848
Carmangay	66 760
Cayley	63 560
Claresholm	4 443
Clyde	22 795
Coalhurst	31 001
Cowley	64 425
Crossfield	107 602
Crowsnest Pass	186 360
Crystal Springs	18 440
Czar	35 973
Delburne	90 120
Delia	64 120
Devon	359 480
Didsbury	109 782
Donalda	64 200
Edgerton	14 533
Edmonton Beach	5 328
Edson	103 036
Elk Point	148 120
Empress	418
Entwistle	7 159
Falher	150 000
Ferintosh	57 400
Fort Assiniboine	78 513
Fort Saskatchewan	120 261
Galahad	33 019
Glenwood	59 080
Grande Cache	414 920
Granum	14 348
Grassy Lake	42 164
Hill Spring	62 600
Hines Creek	87 320
Hinton	197 044
Holden	40 453
Horseshoe	9 796
Innisfail	493 000
Innisfree	65 400
Irricana	65 505
Irvine	73 800
Island Lake South	7 385
Kinuso	20 331
Lakeview	14 298
Lamont	59 884
Larkspur	15 560
Longview	17 294
Magrath	16 347
Marwayne	85 000
Mayerthorpe	132 445
Minburn	1 257
Morinville	66 000
Nampa	38 678
Nobleford	88 760
Oyen	125 560
Penhold	172 040
Plamondon	66 680
Ponoka	147 547
Radway	60 520
Raymond	35 811
Redcliff	29 650
Redwater	209 697
Rockyford	59 515
Rosalind	60 760
Ross Haven	19 720
Rumsey	18 034
Rycroft	7 677
Sandy Beach	21 240
Sexsmith	83 026
Silver Beach	21 240
Silver Sand	20 760
Smoky Lake	112 193
South Baptiste	44 469
Standard	49 912
Stettler	64 928
Strathmore	30 486
Sundance	6 210
Sundre	179 836
Sunset Beach	17 880
Taber	83 677
Three Hills	58 832
Tilley	4 588
Two Hills	301 400
Vermilion	55 006
Veteran	73 795
Vilna	73 240
Vulcan	49 956
Wanham	64 040
Warspite	67 680
Waskatenau	1 145
West Baptiste	66 360
Whitecourt	105 943
White Gull	2 838
White Sand	1 138
Yellowhead	21 800
Youngstown	68 760
	$ 9 004 736

The Occupational Health and Safety Section is responsible for the development and management of the department's programs for occupational health and safety, vehicle/equipment safety and construction zone safety.

To discharge these responsibilities and achieve uniform and consistent safety standards throughout the department, the section provides direction to six regional safety officers who are responsible for co-ordinating and implementing the health and safety programs within each region.

The management and co-ordination of health and safety programs for other areas of the department is handled directly out of section headquarters. The section liaises with other government departments, boards and agencies and also deals extensively with the construction industry.

The department continued its active involvement in the Alberta Government Occupational Health and Safety Program. A senior department official serves as a member of the joint Government/AUPE Occupational Health and Safety Committee. Twenty-five departmental joint worksite health and safety committees comprised of employee and management representatives continued to meet regularly during the reporting period to review accidents, deal with health and safety concerns and make recommendations on corrective action.

The section continued to provide services and assistance to managers, supervisors and workers in meeting their health and safety responsibilities in many areas, some of which include:

- health and safety awareness
- chemical safety data sheets
- transportation of dangerous goods
- health and safety hazard surveys and monitoring
- accident reporting and investigation
- general operation procedures
- evaluation of personal protective equipment and other safety equipment and devices
- traffic accommodation standards and procedures
- construction safety campaign
- health screening and medical surveillance
- statistical data.

A combination of formal health and safety training courses and on-the-job training continued to play a key role in the department's overall accident and loss prevention efforts. A summary of formal courses and the number of participants follows:

First Aid	273
Defensive Driving	341
Professional Driver Improvement	78
Supervisor's Accident Prevention	10
Joint Worksite Health and Safety Member Training	9
Chainsaw Safety, Use and Maintenance	13
Transportation of Dangerous Goods	62
Flagperson Training	61
	847

Some of the major projects the section contributed to during the reporting period include:

- conducted a department wide survey to identify which hazardous materials are used in our worksites
- developed departmental guidelines for the administration of the Occupational Health and Safety Legislation pertaining to principal contractors
- assisted in the finalizing of uniform workzone traffic accommodation standards for street and highway road construction in the province
- hosted the 1987 Western Association of Transportation Employee Safety Supervisors Conference with numerous delegates from various provinces and states.

Following is a breakdown on the Workers' Compensation Board claims administered on behalf of the department for the fiscal year ended March 31, 1988:

Fatalities	—
Lost time injuries	150
Medical aid injuries	101
Hearing loss	5
Personal appliance (eye glasses)	19
Claims under adjudication	1
	276

During the period from April 1, 1987 to March 31, 1988 the Operations Branch was responsible for co-ordinating and monitoring the following programs:

- maintenance of primary highways, rest areas and campgrounds
- construction and maintenance of campsites and rest areas
- maintenance and operation of ferries
- administration and operation of seven construction camps
- administration of the regions administrative budgets.

Operations Branch's mandate includes developing and monitoring standards of primary highway maintenance, the equitable distribution of maintenance allocations throughout the province; the overall responsibility for planning of programs involving rest areas, campgrounds, ferries and department maintenance yards; plus supervision and direction of seven construction crews. The crews work involves seal coat applications, erosion control and guardrail installations on primary and some secondary highways.

Maintenance of Primary Highways

This marked the fourth year in the initiative to privatize a number of maintenance functions. These include campground maintenance, snowplowing local roads, guardrail and sign installations, mowing of highway rights-of-way and seeding of highway rights-of-way. These initiatives have been in the main successful. In previous years problems were encountered with the standard of performance particularly with the highway mowing work, however, 1987/88 saw some improvement in this area.

Maintenance of primary highways accounted for expenditures of $68 745 021. The types of roads maintained in two-lane equivalent kilometres are:

	GRAVELLED	OILED	PAVED
Primary Highways	1 027	423	13 273
Approach Roads	18	7	290
	1 045	429	13 563

Erosion Control Program

During the 1987/88 construction season, a total of 172 erosion control projects were completed. Seven thousand three hundred and fifty-eight hectares (18 183 acres) of rights-of-way, borrow areas and gravel pits were seeded to grass and fertilized along primary highways, secondary roads, resource roads, improvement district local roads and airports.

Total expenditure was $1 795 200. A total of 15 shifts were lost due to adverse weather.

4-H Clean-up Program

During the 1987/88 4-H Clean-up Campaign, a total of 9725 children and 3313 adults representing 577 clubs participated in cleaning up Alberta's primary highway rights-of-way. A total of 8633.75 kilometres were cleaned with 63 760 bags of litter being collected.The clubs earned a total of approximately $187 492. Program expenditure was approximately $336 047.

Signing

Major signing was undertaken on construction projects involving the installation of approximately 3400 signs. In addition to this, 500 signs with break-away bases were installed on existing and new projects. Along with this two overhead sign structures were installed on multilane highways. The installation of traffic signals and crosswalk signals was completed at 10 locations. The expenditure for the signing, traffic signals and guardrail installation was approximately $5 055 000. The program also assisted the safe movement of the Olympic Torch Relay with signing and traffic safety through Alberta at a cost of approximately $10 256.

Guardrail Program

The raising of substandard guardrail to appropriate heights and the installation of guardrail on new projects totalled 134 100 metres.

Approximately 7900 road edge delineators were installed in combination with this work.

Skid Resistance Program

The department's two camps applied skid resistance surfacing to 502.13 kilometres of paved surface on the province's primary highway system at a total cost of $3 715 164.

Additionally, 10.62 kilometres of paved roadway on the secondary road system had skid resistance surfacing applied. A high float emulsion skid resistance surface was applied to 149.61 kilometres of secondary roads, 18.74 kilometres on the province's primary highway system, 13.39 kilometres to approach roads and 2.79 kilometres to tourism resource roads. The total expenditure incurred for doing this work was $1 176 374.

The department also contracted 62.86 kilometres of skid resistance surface treatment to the private sector for a total of $736 571.

The sum of $1 650 215 was expended during the fiscal year on the crushing of suitable rock chip material. Total costs for washing of the crushed chips amounted to $324 788.

The entire skid resistance treatment program was not completed due to poor fall weather conditions. However the projects scheduled and completed were within budget allocations.

Maintenance and Operation of Ferries

Operations Branch was responsible for allocating funds for the operation and maintenance of seven ferries throughout the province.

A new self propelled steel ferry for the La Crete crossing was put into operation in 1987. The design was done by consultants and a contract for fabrication was awarded in February 1987. Construction was completed in 1987 and the new ferry was officially launched by the Minister on October 17, 1987.

The 1987 season proved to be unusually long due to the mild weather in the fall. The La Crete Ferry remained in operation until the end of November while the Shaftesbury Ferry operated until the first week of December.

The total expenditure for the operating, maintaining and upgrading of ferries was $1 501 044.

Construction of Campsites and Rest Areas

During the 1987/88 construction season a total of $325 000 was allotted for upgrading Alberta Transportation and Utilities' campgrounds. Upgrading included improved water supply, improved access, landscaping, improved waste handling facilities and campground amenities. A grant of $36 400 was provided to the Village of Longview to assist in the construction of a rest/picnic area development. The department agreed to provide the City of Medicine Hat with a grant of $189 000 towards the construction of roads, parking areas, landscaping and dump station at a city rest area. Of the total grant, $115 000 was provided from 1987/88 funding with the balance to be provided during the 1988/89 fiscal year. Alberta Transportation and Utilities agreed to transfer the Birch Lake campground to the Village of Innisfree and provide a grant for internal road work during 1988/89. The department agreed in principle to assume control of the Silver Valley Campground from Alberta Recreation and Parks. Alberta Transportation and Utilities engaged the services of an architect to design a flush toilet facility which is intended for construction at a selected high use campground.

The Ranchland Teepee Rest Area located near Brooks was completed in the fall of 1987 and was subsequently opened to the public. Visitation has been very high and the rest area is receiving positive comments.

The total expenditure for the construction of campgrounds and rest areas was $976 146.

MAINTENANCE OF PRIMARY HIGHWAYS

1987/88 fiscal year

DISTRICT	EXPENDITURES
1	$ 2 429 947
2	4 528 962
3	3 198 878
4	8 608 123
5	3 284 411
6	6 994 806
7	6 195 687
8	5 024 860
9	3 551 898
10	3 909 890
11	4 580 123
12	5 167 544
13	4 658 093
14	2 648 266
15	3 312 571
HEAD OFFICE	
4-H Clean-up	336 047
Rick Hansen	667
Olympic Torch	10 256
Laboratory Testing	401
General	303 591
	$68 745 021

OPERATION & MAINTENANCE OF FERRIES

1987/88 fiscal year

FERRY	LOCATION	EXPENDITURES
Bleriot	Red Deer River	$ 129 046
Bleriot	Red Deer River	100 312
Crowfoot	Bow River	109 434
Finnegan	Red Deer River	88 662
Klondyke	Athabasca River	102 372
La Crete	Peace River	303 860
La Crete	Peace River	30 065
La Crete	Peace River	108
La Crete	Peace River	141 725
Rosevear	McLeod River	116 723
Shaftesbury	Peace River	265 032
Shaftesbury	Peace River	109 054
Head Office		4 651
		$ 1 501 044

CONSTRUCTION OF CAMPSITE & REST AREAS

1987/88 fiscal year

DISTRICT	EXPENDITURES
1	$ 758 245
2	—
3	6 353
4	22 302
5	—
6	11 415
7	29 204
8	18 025
9	16 855
10	2 468
11	58 011
12	20 289
13	20 469
14	—
15	12 510
	$ 976 146

Aviation is responsible for the preparation and administration of the Provincial Airport Development Program.

During the year meetings were held with local officials in many communities to provide information on the Provincial Airport Development Program and give advice and assistance regarding operations.

Liaison was continued with aviation related industries and organizations. Aviation was represented on organizations such as the Alberta Aviation Council, the Air Transport Association of Canada, the Canadian Aeronautics and Space Institute and the International Northwest Aviation Council.

Background information, technical advice and position papers for senior management were provided on a wide variety of aviation subjects, as part of departmental initiatives, or in response to federal activities in both the operational and policy areas of air transportation.

During the summer of 1987, an official opening ceremony was held for the airport at Forestburg.

Expenditures of the headquarters component amounted to $245 093 which covered the planning, programming and administration of aviation activities. Included in this total were grants of $121 250 to the Alberta Aviation Council and its subsidiary sector, the Civil Air Rescue Emergency Services (CARES). The CARES system provides training to flying personnel in the specialized task of airborne searching, and the organizational structure to mount searches for missing aircraft or other emergency situations.

Airport Operations and Maintenance

Aviation is responsible for monitoring the operation and maintenance of 16 provincial airports and 61 forestry airstrips.

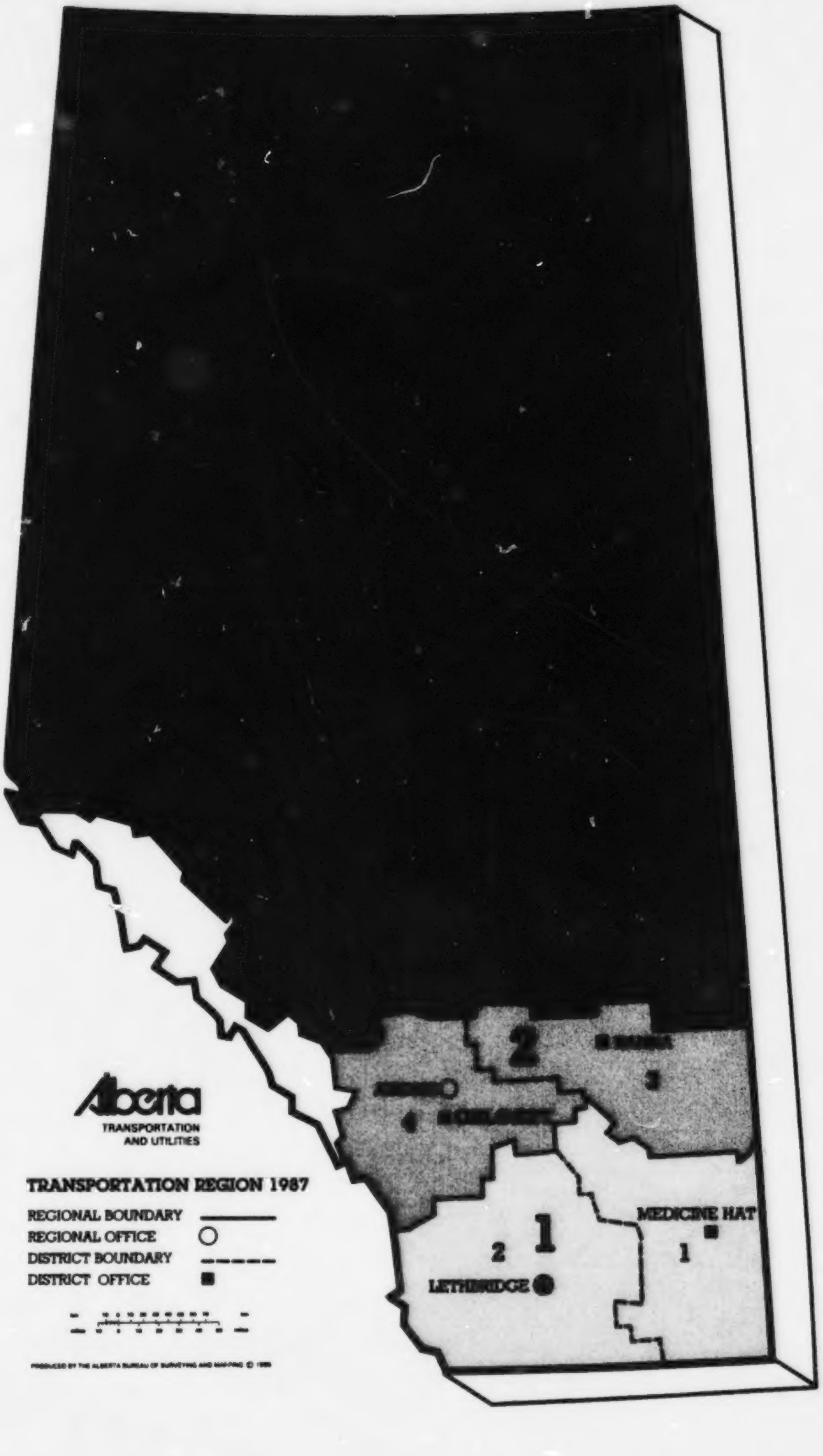
It provides support and develops standards and guidelines for maintenance and all operations. The area also has responsibility for the civilian Medley Air Terminal at Canadian Forces Base Cold Lake, and for non-directional radio beacons on community airports at St. Paul, High Prairie, and Fairview.

Expenditures on operations and maintenance activities during the reporting period totalled $2 521 953.

AIRPORT OPERATIONS AND MAINTENANCE

1987/88 fiscal year

AIRPORT	EXPENDITURES
Cooking Lake	$ 125 827
Edson	96 572
Fort Chipewyan	175 428
Fort Vermilion	23 809
Grande Cache	133 097
High Level	188 258
Jasper/Hinton	108 120
Lac La Biche	114 351
Lloydminster	170 288
Manning	104 614
Medley Air Terminal	141 096
Pincher Creek	125 556
Rocky Mountain House	108 525
Slave Lake	158 532
Swan Hills	143 915
Wabasca	38 224
Whitecourt	94 604
Forestry Airstrips	279 339
Head Office: Microwave Landing, Systems Monitor & Maintenance	43 962
Head Office: Distance Measuring Equipment, Monitor & Maintenance	83 603
Head Office: Non-directional Beacons, Monitor and Maintenance	61 620
Head Office: Maintenance of Runway Lighting Radio Control Systems	2 620
	$ 2 521 953


2
3
4
1
2
1
MEDICINE HAT
LETHBRIDGE
Alberta
TRANSPORTATION
AND UTILITIES
TRANSPORTATION REGION 1987
REGIONAL BOUNDARY
REGIONAL OFFICE
DISTRICT BOUNDARY
DISTRICT OFFICE
PRODUCED BY THE ALBERTA BUREAU OF SURVEYING AND MAPPING ©

Region 1 (Southern)

The recent trend toward warmer and drier weather in Southern Alberta continued during the 1987/88 fiscal year. As a result the region's construction and maintenance programs progressed very satisfactorily. The majority of the scheduled construction projects were completed and considerable progress was made on some of the late season tenders.

A total of 34 construction contracts were undertaken during the season resulting in 160 kilometres of grading, 145 kilometres of base course and 140 kilometres of paving. Total expenditures in Region 1 for 1987/88 were approximately $66 million.

All maintenance activities undertaken by both department forces and private contractors were completed as scheduled. A few winter storms were experienced but for the most part precipitation was below normal and mild temperatures prevailed. These conditions resulted in savings in the winter maintenance budget while keeping the highways in good driving condition throughout the winter.

Under the ongoing irrigation canals rehabilitation program the department worked with Alberta Environment, local road authorities and irrigation districts in replacing and rehabilitating a number of irrigation bridges. Other major structures commenced in the region included the Castle River bridge on SR 507 west of Pincher Creek and the Little Bow River bridge west of Carmangay on Highway 23. A number of other small bridges were also completed on secondary and local roads. Two major bridge decks were also restored under the Major Bridge Maintenance Program.

Other major construction highlights in the region were:

- Three major twinning projects were completed on Highway 1:
    - a 15 kilometre grading and base course project from east of Highway 56 to north of Bassano
    - a 15 kilometre carryover grading, base course and paving project from north of Lathom to east of Southesk
    - a 14 kilometre grading and base course project from east of Suffield to SR 524.

The completion of these sections of four-laning together with the completion of the four-laning through Medicine Hat in 1987 results in the highway now being four-laned from west of Banff to east of Brooks and from east of Suffield to Highway 41 south.

- Work commenced on a 21 kilometre twinning project on Highway 2 between Nanton and Stavely.
- An 11 kilometre regrading, base course and paving project was completed from Fort Macleod south.
- The last base course was completed on a 21 kilometre project on SR 509 south of Highway 3 providing a surfaced connection across the Blood Indian Reserve between Lethbridge and Stand Off.
- A 15.8 kilometre base course project on SR 774 south of Beaver Mines toward the Westcastle area was completed.
- A 10 kilometre base course project was completed on SR 785 from Highway 2 west toward the Head Smashed In Buffalo Jump Interpretive Centre.
- Grading and base course was completed on a 21 kilometre project on SR 845 on a new alignment north of Highway 25, providing for a more direct connection between Lomond and Coaldale.
- The program to provide a paved connection between Foremost and Cardston was continued on SR 879 and SR 501. Work included a 16 kilometre base course project south of Etzikom, a 20 kilometre grading project east of Milk River and 13 kilometre final paving project east of Cardston.
- The Ranchland Teepee Rest Area was completed between Bassano and Brooks adjacent to Highway 1. The unique design of the building represents the native heritage of the area.
- Airport work included the installation of medium intensity lighting at the Brooks community airport and the installation of a non-directional beacon at the Foremost community airport.

Several other final paving and overlay projects were completed on both primary highways and secondary roads in the region thus preserving the investment on these roads.

Several new signing initiatives were undertaken during the year in support of the increased emphasis of communities on tourism. Included was a large map sign for the Head Smashed In Buffalo Jump Centre.

Assistance with street improvements was provided to Barons, Brooks, Carmangay, Claresholm, Coalhurst, Cowley, Crowsnest, Glenwood, Granum, Grassy Lake, Hill Spring, Irvine, Magrath, Nobleford, Raymond, Redcliff, Taber, Tilley and Vulcan.

A close working relationship was maintained with all rural and urban municipalities in the region and other government departments in an effort to meet the transportation needs of the region.

Region 2 (South Central)

The year 1987/88 was one of accomplishment and a year of beginnings in the South Central Region.

The year saw the opening to public use of the northwest leg of the City of Calgary's light rail rapid transit system. This project was largely funded by the province through Alberta Transportation and Utilities' grants.

For many months prior to February 1988, the region had been an active participant in the planning and preparations for the "transportation" component of the 1988 Winter Olympic Games. The games held in February 1988 were a great success, including the movement of participants and spectators to and from the athletic events in the mountains west of Calgary.

The 1987 construction season featured a long open fall which extended the usual construction period beyond that normally experienced and the 1987/88 winter was mild with generally light snowfalls.

Expenditures for the region in 1987/88 for the construction and maintenance of highways and bridges was approximately $85 million. Approximately 176 kilometres of grading, 118 kilometres of base course and 306 kilometres of final paving and resurfacing were completed. More than 200 individual bridge construction or major repair projects were also completed during the year.

The Bleriot Ferry which carries vehicles across the Red Deer River northwest of Drumheller was replaced in 1987. This ferry is the most heavily used in the province.

Construction highlights during 1987/88 included:

- Reconstruction was completed on a 19 kilometre section of Highway 1A from west of Ghost River to west of Cochrane.
- Reconstruction was completed on a 13 kilometre section of Highway 2 from north of Airdrie to south of Crossfield to an improved divided highway standard eliminating access to Highway 2. This project marked the beginning of a series of similar projects to improve the safety characteristics of Highway 2 between Airdrie and Red Deer.
- Pavement resurfacing was completed on 59.3 kilometres of Highway 9 between Richdale and east of Oyen and an added 3.6 kilometres of Highway 41 between Highway 9 and Oyen.
- The paving of a 26 kilometre section of Highway 22 from north of Cremona to the junction of Highway 27 resulted in a significant improvement for the numerous users of this highway.
- Reconstruction started on the conversion of a section of Highways 22 and 22X east of Priddis to west of Highway 2 bringing this up to a divided highway standard. This project which is a needed safety improvement will be completed in 1988.
- Grading was completed on a 14 kilometre section of SR 546 from the Forest Reserve Boundary to Turner Valley.
- Paving was completed on a 20 kilometre section of SR 547 from Highway 2 to SR 799.
- Base course and paving was completed on a seven kilometre section of SR 791, from north of Highway 72 to the Municipal District of Rocky View Boundary.
- Grading was completed on 18.5 kilometres of SR 575, from Acme to Highway 21.
- Base course was completed on a 7.2 kilometre section of SR 575 in the Kirkpatrick area west of Drumheller.
- Grading was completed on 6.4 kilometres of SR 565 west of Acadia Valley.
- Regrading to improve intersection safety and base course construction was carried out at the intersection of SR's 805 and 587 north of Wimborne.
- Final paving was completed on SR 851 from Highway 9 north for 15.4 kilometres to Wolf Creek.
- A 13 kilometre grading project on SR 855 north of Dowling Lake completed the reconstruction of this secondary road from Highway 9 north to the Special Areas Boundary.
- Eleven kilometres of base course construction were completed on SR 555 east of Jenner.

A variety of bridge projects were completed. Major construction on the primary system included Highway 2 over the Sheep River and SR 940 over the Highwood River. Bridges were also constructed on local road crossings of the Rosebud River near Carstairs and Dogpound Creek near Harmatton. Bridge deck restorations were completed on the Bow River bridge near Canmore, the CPR Overpass near Seebee, the Morley Grade Separation, the Little Bow River near High River, Berry Creek near Richdale, and the High River Grade Separation.

Region 3 (Central)

Expenditures for construction and maintenance in the Central Region totalled approximately $78 million.

Highlights of the major construction projects in the region were:

- Highway 11 - from Red Deer to Benalto, with bypass of Sylvan Lake was completed eliminating long traffic lineups through the congested Sylvan Lake beach area during summer months.
- Highway 11 - from Eckville to east of Highway 22 was repaved with two sections of passing lanes provided and numerous intersections improved.
- Highway 41 - from Gooseberry Park to south of Czar paved.
- Highway 53 - from west of Medicine River to east of SR 766 received final pavement.
- Highway 54 - was realigned and widened through the sharp curve section near Raven.
- Highway 56 - overlay was completed from Stettler to south of Fenn.
- Highway 56 - final pavement from Highway 13 to Edberg.

Secondary Roads:

Grading projects on secondary roads included:

- Secondary Road 584 - Forest Reserve Boundary to SR 940.
- Secondary Road 599 - Talbot to SR 872 north Coronation.
- Secondary Road 600 - Cadogan to Provost.
- Secondary Road 605 - Bashaw west.
- Secondary Road 766 - Highway 54 to Highway 11 south of Eckville.
- Secondary Road 795 - north of Highway 53 to SR 611.

Base course on secondary roads included:

- Secondary Road 587 - Highway 22 and James River Store to Red Deer River.
- Secondary Road 589 - Highway 56 to SR 851 west of Byemoor.
- Secondary Road 870 - Lougheed to south of Kinsella.

Paving on secondary roads included:

- Secondary Road 609 - Edberg to Highway 56.
- Secondary Road 872 - Coronation to SR 586.

Resource Roads:

Resource Road funding was provided for grading of 14 projects on a cost-sharing basis with industry and municipality:

- County of Camrose - Imperial Access Road north east of Hay Lakes.
- County of Flagstaff - Petro Canada Access Road and the Voyager, Renaissance Road.
- Municipal District of Provost:
  - Hayter north Access Road
  - Norcen Plant Access Road
  - Cactus Lake Haul Road
  - Renaissance Plant Access Road.
- County of Ponoka - Schultz Hall Road.
- County of Wetaskiwin - west of Highway 22.
- County of Lacombe - northeast Bypass.
- County of Red Deer:
  - Poplar Ridge Access
  - Calgary and Edmonton Trail
  - Dickson Dam Resource Road.
- Municipal District of Clearwater - O'Chiese Access Road.
- Special Area 4 - Sounding Lake engineering study and the haul road to Highway 41.

Approach Roads were upgraded:

- Buck Lake - west access paved to Highway 13.
- Edberg - Railway Avenue access to SR 609 paved.
- Sylvan Lake - 47 Avenue access to Highway 20 graded.

Assistance with street improvements was provided to: Alix, Alliance, Amisk, Crystal Springs, Czar, Delburne, Donalda, Ferintosh, Galahad, Innisfail, Penhold, Ponoka, Rosalind, Silver Beach, Stettler, White Sand and Veteran.

There were approximately 185 kilometres of primary highways and secondary roads paved including 73 kilometres that were overlaid under the Pavement Rehabilitation Program. Sixty-eight kilometres were completed to a base course stage. One hundred and eighty-five kilometres of primary highways, secondary roads and resource roads were graded or regraded.

Regional staff met with the rural municipalities and a number of urban communities throughout the year to review and resolve local transportation issues.

Region 4 (Northeast)

Construction and maintenance expenditures for the North East Region were approximately $90 million.

The following are some of the construction highlights for the region:

Primary Highways:

- Highway 14 - paving from east of Wainwright to east of junction SR 897.
- Highway 15 - completion of paving from west of Lamont to Chipman.
- Highway 16:
  - completion of grading, base course and paving from the junction of Highway 15 to west of Vegreville
  - commencement of grading, base course and paving from east of Vegreville to west of Lavoy
  - completion of grading, base course and paving from west of Lavoy to east of the junction of Highway 36
  - commencement of grading, base course and paving from west of Vegreville to east of Vegreville.
- Highway 17 - paving from Lone Park Access to Lloydminster (50 per cent cost-shared with Saskatchewan).
- Highway 26 - completion of base course from east of SR 854 to east of SR 855.
- Highway 28 - improvements within the Town of Grand Centre on a cost-shared basis with the community.
- Highway 28A - paving from Ashmont to southeast of Mallaig.
- Highway 36 - paving from south of Highway 26 to Highway 14 south of Viking.
- Highway 41:
  - completion of reconstruction from south of Elk Point to north of Elk Point
  - grading and base course from south of Beaver River to Highway 55.
- Highway 45:
  - completion of base course from Highway 41 to west of Dewberry
  - completion of paving from west of Dewberry to north of Marwayne.
- Highway 63:
  - start of base course and paving from north of House River to north of Crow Lake
  - commencement of grading, base course and paving from south of Hangingstone River to south of PR 119
  - selective overlay from Highway 55 to Wandering River
  - completion of grading, base course and paving from north of Wandering River to east of McMillan Lake.

Secondary Roads:

- Secondary Road 637 - completion of base course from SR 855 to west of SR 857.
- Secondary Road 640:
  - finished grading from Highway 41 to SR 897 south of Heinsburg
  - base course from Highway 41 to SR 897 south of Heinsburg.
- Secondary Road 641 - grading from west of Tulliby Lake to west of Makoo Indian Reserve.
- Secondary Road 646 - completion of grading from east of Stony Lake to Highway 41 at Elk Point.
- Secondary Road 659 - cement stabilized base course from SR 892 (south of Ardmore) to SR 897.
- Secondary Road 660 - paving from SR 882 to west of Franchere Bay.
- Secondary Road 855:
  - completion of grading from Highway 14 to SR 626
  - grading from north of Highway 26 to Highway 14
  - cement stabilized base course from Highway 28 to the Hanmore Lake Access.

- Secondary Road 881 - completion of base course from the county boundary to south of Irma.
- Secondary Road 892 - cement stabilized base course from SR 659 to Highway 28 at Ardmore.
- Secondary Road 897:
  - cement stabilized base course from Highway 14 to west of Paradise Valley
  - selective regrading from the south boundary of Indian Reserve #121 to north of Frog Lake
  - commencement of grading from north of Frog Lake to east of Reita Lake.

Approach Roads:

- St. Michael - grading from SR 637.
- Mallaig - pavement overlay from Highway 28A.
- Pine Ridge Tree Nursery - completion of base course from Highway 28.

The following summarizes projects undertaken in the region under the Primary Highway, Secondary Road, Resource Road Improvement, Twinning and Pavement Rehabilitation Programs:

- eight grading projects for approximately 94 kilometres of construction
- ten combined grading, base course and paving projects for approximately 95 kilometres
- eleven base course projects for approximately 162 kilometres
- ten paving projects for approximately 138 kilometres.

Assistance for street improvements was provided to Andrew, Ardmore, Bonnyville Beach, Edgerton, Elk Point, Fort Kent, Holden, Horseshoe Bay, Innisfree, Marwayne, Minburn, Plamondon, Ribstone, Smoky Lake, St. Edouard, Therien, Two Hills, Vermilion, Vilna, Warspite and Waskatenau.

Grading was completed on 73 kilometres of roadway and 750 kilometres were gravelled in the Improvement District #18 road program.

Regional staff worked with rural municipalities, improvement district councils, and town and village councils throughout the year to review and where necessary, resolve local transportation issues.

Region 5 (North West)

The North West Region, comprising of the districts of Edmonton, Edson, and Athabasca, had a total 1987/88 fiscal expenditure of approximately $131 million for capital construction and maintenance. This was up marginally from the previous year; however, the region as a whole actively pursued a program of staff downsizing and significant reductions were accomplished.

Another relatively mild winter permitted construction projects to continue fairly late in the season, making up for poor weather in midsummer. This also permitted maintenance crews to stay on top of snow and ice control, with the exception of a heavy spring snow storm south of Red Deer where this region's crews were called to assist, roads were generally maintained in a bare and dry condition.

The twinning of the Yellowhead Highway (Highway 16) continued on schedule, with total expenditures of $24 600 000. Major sections were opened at Entwistle and Hinton with projects continuing east of Hinton and east of Edson.

Of significance was the construction of a major bridge structure over the McLeod River east of Edson, together with the upgrading of the streets through the Town of Edson.

Following are some other highlights of the construction program:

- A new bridge was constructed across the McLeod River in Whitecourt on Highway 43, together with substantial improvements to the highway, including a twinned section and intersectional treatment for access into Miller Western Pulp Mill.
- On Highway 60 at Devon the first bridge of the twinned section was opened with construction commencing on the second bridge.
- Pavement overlays on older highway structures continued to have a high priority particularly in light of the increasing volumes of heavy traffic. In conjunction with these projects passing lanes were added to SR 620 east of Lodgepole and climbing lanes were constructed on Highway 43 east of Whitecourt.
- In recognition of increased resource activity in the west Pembina area grading was completed on SR 620 west of Lodgepole. Improvements were made to the bridges and approaches at the Brazeau Dam, a well utilized License of Occupation Road previously held by Dome Petroleum was made public, and a number of ongoing projects continued on the Elk River Road, the Wolf Lake Road, and SR 753.
- An important initiative was undertaken between Calling Lake and Wabasca with the preliminary engineering of a new alignment for SR 813, which when constructed will provide an important link between these communities. Substantial preparatory clearing work was undertaken hoping for an early start on construction.
- Continued emphasis was placed on developing the secondary road system in the province which is now developing to the point where a significant percentage of these roads are surfaced. In keeping with the philosophy of privatizing some of this work, SR 651 was regraded in the Municipal District of Sturgeon, and also SR 830 south of the Vinca Bridge in the County of Strathcona using the services of engineering consultants.

Region 6 (Peace)

The total capital construction program in Region 6 was reduced somewhat in 1987/88 both because of continued departmental fiscal restraint and poor weather in some areas during the summer/fall seasons. Approximately $141 million were expended on maintenance and capital works.

The 1987/88 year was highlighted by three major positive events. The first was the official opening of Highway 40 in Grande Cache on June 13, 1987. Although the highway was completed and available for use in late fall 1986 the official opening was deferred until June, 1987 to take advantage of better weather. Completion of the surfacing of Highway 58 between Rainbow Lake and High Level was celebrated with a ribbon cutting at the Chinchaga River Bridge on October 2, 1987.

Paving of this major access to Rainbow Lake started in 1981 and its completion was well received. On October 17, 1987 a new modern ferry was deployed to replace the small, older unit at the the Tompkins Landing Crossing on the Peace River southeast of La Crete. The new vessel includes state-of-the-art electronics and is capable of transporting fully loaded B-train trucks.

The August long weekend was marred by torrential rains and flooding in several areas of the region. The most significant precipitation was experienced in the Simmonette River area and several bridges and culverts were washed out, the most significant loss being the destruction of the Simmonette River Bridge on the Forestry Trunk Road, south of Goodwin. While this structure had been designed for a 1:100 year flood, it has been estimated that volumes in the river at the crossing peaked at levels that would not be predicted to occur more than once every 300 years. Several of the area highways were closed temporarily, but within a few days traffic was restored except at the Simmonette, where a temporary bailey bridge was erected. Work on a new permanent structure was started however completion will be carried over to 1988/89. During this same storm the High Level/Fort Vermilion area was also deluged which resulted in the washing out of the bridge over Rat Creek on the Wadlin Lake Road. The creek cut a new channel and it will be necessary to relocate the bridge to the new channel. This work will be completed in the summer of 1988.

The High Prairie District experienced quite a busy construction season and accomplishments included:

- Grading, base course and final paving of a new airport in Red Earth.
- Grading, base course and final paving of a 3.9 kilometre section of Highway 88 through the developed area of Red Earth. Grading, base course and paving were completed on 3.3 kilometres of the Peerless Lake Road in Red Earth including the access to the new airport.
- Base course of SR 676 to the junction of SR 744 in the Whitemud area for 20 kilometres was completed.
- Construction of a new section of SR 686 from Highway 88, near Red Earth, west for 10 kilometres was undertaken. This is part of a major connector planned to link Red Earth and Peace River.
- Final paving of SR 750 for 14.4 kilometres north of PR 143 was completed.
- Base course and final paving of 15.8 kilometres of SR 754 from the junction of Highway 88 eastward.

During the winter season several major projects were advanced in the district including:

- The clearing, preliminary survey, design, gravel crushing and stockpiling for a 39 kilometre section of SR 813 south of Sandy Lake. This preliminary work was undertaken so that the construction of the connection between Sandy Lake and Calling Lake could be advanced during the 1988 construction season. Some of the gravel crushing and hauling will be carried over to 1988/89.
- The clearing, preliminary survey, design, gravel crushing and stockpiling took place for 31 kilometres of SR 686 from Highway 88 east in the Red Earth area. Construction of this road, which will commence in 1988/89 and will continue over the next several years, will provide a modern gravel standard access to the Peerless Lake area.
- Gravel was stockpiled for future final pavement on SR 747 from Sunset House north to Highway 2 for a distance of 39 kilometres.

Coupled with the completion of Highway 40 in 1986, and a wet construction season, there was a reduction in the amount of capital works undertaken in the Grande Prairie District; however, several major projects were advanced including:

- A start was made on the recycling of the asphalt surface and replacing with granular base course and final pavement on Highway 49 from SR 725 east of 14.2 kilometres in the Spirit River area. All of the road work will be carried over to 1988.
- The final paving on Highway 59 from Highway 2 north of Sexsmith for 27 kilometres to La Glace was completed.
- The awarding of contracts was done for the final paving of Highway 59 between Valhalla and La Glace for 14.8 kilometres and for the reconstruction and base course of 21 kilometres of Highway 59 from Valhalla to Highway 2 northwest of Hythe. Both of these projects will be carried over to 1988.
- Regrading of SR 665 for 4.8 kilometres for Highway 43 east was nearly completed. Some clean-up work will be required in 1988.
- Selective reconstruction base course and final paving of 13.6 kilometres of SR 666 in the Grovedale area was substantially completed, with the remaining work being carried over to 1988.
- A contract for the base course and final paving of 11.4 kilometres of SR 667 in the Hinton Trail/Elmworth area was awarded and while the contractor did crush most of the aggregate required the actual roadwork will be undertaken in 1988.
- Reconstruction of the Emerson Trail (SR 672) was continued on a cost-shared basis with the County of Grande Prairie. This project which was started in 1986 has now seen about 21 kilometres built to modern gravelled standards.
- Completion of the regrading of SR 676 and SR 736 from Puskwaska River north and east for approximately three kilometres.
- A contract was awarded for the base course of SR 677 and SR 731 for 10.1 kilometres in the Woking area. The project which also included regrading was started but most of the work will be carried over to 1988.
- Regrading of SR 681 in the Silver Valley Area continued for five kilometres.
- Base course of SR 719 in the Bonanza area which was started in 1986 was completed.
- The reconstruction of SR 731 from Highway 49 at Spirit River south for approximately six kilometres in preparation for future surfacing.

- Regrading of 4.1 kilometres and base course of 20.2 kilometres and base and final paving of 2.2 kilometres of SR 733 in the Wanham area was tendered. The successful contractor will start work in 1988.
- A contract was awarded for the reconstruction of SR 733 for 19.4 kilometres north of Teepee Creek. All of this project will be carried over to 1988.
- Upgrading of the Forestry Trunk Road (SR 734) north of the Smoky Tower continued. This multi-year project has now seen about 100 kilometres of this resource road rebuilt to modern standards from Highway 34 at Goodwin, southwards.

Peace River District had a busy year in 1987/88 which was highlighted by the announcement in February, 1988 from Daishowa Canada Company Limited that they intended to construct a Kraft Pulp Mill north of Peace River. Preliminary engineering, survey, design and clearing of the access to the mill was undertaken late in the fiscal year, with all of the roadway infrastructure planned to be built in the next three-five years.

During the summer construction season the following major projects were undertaken:

- Base course of 22.4 kilometres of Highway 64 from SR 726 westerly was completed.
- A contract was awarded for 16.5 kilometres of base course on Highway 64 in the Clear River area. Road work will be started in 1988.
- Reconstruction was started on a three kilometre section of SR 685 at the David Thompson crossing of the Hines Creek, north of Fairview, to facilitate the removal of the bridge and replacement with a very large culvert. While the culvert installation was substantially completed a significant amount of road work will be carried over to 1988.
- Construction of 7.3 kilometres of SR 686 from Little Buffalo east was completed and the contractor started on the construction of an additional 15.3 kilometres from east of Little Buffalo to west of the Lubicon River. Substantial work was completed during the winter with the balance scheduled to be finished during 1988.
- Widening of 14.6 kilometres of SR 689 from Dixonville west as well as reconstruction of eight kilometres in the Clear Hills area was completed early in the season. A tender for the base course of the entire 22.6 kilometres was awarded and the road work is scheduled for 1988.
- Base course of 11.7 kilometres of SR 690 from Highway 35 to Deadwood was completed.
- Base course of SR 692 from Highway 35 to east of Hawk Hills for 13 kilometres was completed.
- Reconstruction of SR 726 from Highway 64 to Worsley for 16.1 kilometres was nearly completed with a small amount of carryover work required in 1988. A separate contract involving the construction of a very large concrete arch culvert in the Eureka River crossing on SR 726 was also completed in conjunction with the regrading contract.
- Construction was completed on SR 741 for 3.2 kilometres north of SR 691 in the Manning area.
- Construction of SR 743 on a new alignment for 12.6 kilometres in the south Deadwood area was completed.
- Upgrading of the Chinchaga Forestry Road for six kilometres in the area north of Manning was completed.
- To provide better access for tourists, the 1.9 kilometre road to the Twelve Foot Davis Grave Site from the Town of Peace River was surfaced.
- Upgrading and major construction of nine kilometres of streets in the community of Little Cadotte was completed.
- Construction of an eight kilometre access to the Whispering Pines Ski Hill northwest of Worsley was completed in time for use during the winter season.
- A special agreement was negotiated to allow the department to gravel the Stony Lake Road northeast of Hines Creek. This private log haul road is used extensively by the public for access to hunting and fishing areas.
- Four kilometres of the Sunny Valley Road, east of North Star were regraded. Upgrading of this major resource road has been a multi-year project.

High Level District did not enjoy very good weather through much of the construction season. However, in addition to deployment of the new ferry at Tompkins Landing, and completion of the surfacing on Highway 58 to Rainbow Lake; the following major projects were undertaken:

- Final paving of 22.7 kilometres of Highway 58 west of the Chinchaga River.
- Final paving of SR 697 for 18 kilometres from the junction of Highway 88 (formerly Highway 67) south. Also included in this contract was paving of the Blumenort access and of the main street in each of La Crete and Fort Vermilion. The Fort Vermilion airport was overlaid as part of the overall project.
- Base course of 19.1 kilometres of SR 697 in the La Crete area and 3.7 kilometres of the south La Crete access was completed.
- Reconstruction of 7.7 kilometres of Highway 88 north of the Bear River in the Fort Vermilion area. The bridge over the Jackpine Creek on Highway 88 south of Fort Vermilion was replaced with a large culvert.
- Late in the year a contract was awarded for construction of 27.1 kilometres of Highway 58 from the Lawrence River to the Wenzel River. Substantial work was completed under frozen conditions with the balance anticipated to be finished early in 1988.
- Regrading of SR 697 in the Tompkins Landing area continued with approximately eight kilometres being upgraded.
- Construction continued in both summer and winter on the multi-year project to provide an upgraded access to north of the Hay River, north of Assumption. In total some 23 kilometres will have been built by the time the project is completed, including a new bridge over the Hay River and one over Sousa Creek. Construction of these bridges commenced with completion scheduled for late fall of 1988.
- A new terminal building was built at the High Level Airport and the parking lot was reconstructed to a standard suitable for future surfacing.

In addition to the major bridge projects already noted the following was done:

- Several smaller bridges were replaced in the County of Grande Prairie (on the Emerson Trail and in the Lymburn and La Glace areas); at the Iroquois Creek near High Prairie, and at Kakut Creek south of Wanham. In addition to this some 30 new bridge size culverts were installed throughout the region.
- The bridge strengthening program continued at a slower rate this year with a project on the Boyer River north of Fort Vermilion and one on the Burnt River north of Wanham.
- Major substructure repairs were done on a bridge north of Slave Lake and one southeast of Worsley. Timber caps were replaced on several standard bridges.
- The program of treating bridge decks with chips and epoxy sealant was continued with a project over the Little Smoky River southeast of Valleyview.
- On the Keg River bridge on Highway 35 the old deck was replaced with a latex modified concrete overlay.

Other new major bridges were constructed over the Loon and Lubicon Rivers on SR 686 between Peace River and Red Earth and on the Goose River on SR 745 southeast of Valleyview.

REGIONAL ADMINISTRATION

1987/88 Fiscal Year

REGION		EXPENDITURES
1	Regional Office	$ 743 641
	District 1	406 878
	District 2	469 833
2	Regional Office	1 009 743
	District 3	351 205
	District 4	526 022
3	Regional Office	724 254
	District 5	316 430
	District 6	439 524
4	Regional Office	712 668
	District 10	459 854
	District 11	484 417
5	Regional Office	1 123 252
	District 7	529 332
	District 8	587 564
	District 9	474 411
6	Regional Office	696 286
	District 12	384 205
	District 13	486 447
	District 14	454 207
	District 15	340 319
HEAD OFFICE EDMONTON		
Aviation		245 093
RTS-H-O Safety Program		160 689
Operations Administration		575 235
		$ 12 701 509

CONSTRUCTION PROGRAMMING

1987/88 Fiscal Year

	EXPENDITURES
Director's Office	$ 276 072
Program Management	884 630
Program Development	431 863
Municipal Services	202 468
Aviation Programming	33 480
	$ 1 828 513

URBAN TRANSPORTATION AND PLANNING DIVISION

L.B. Root
Assistant Deputy Minister

Corporate Planning Services 53
M.M. Duncan
Executive Director

Planning
K. E. Howery
Executive Director

Operational Planning Branch 54
R.J. Sawchuk
Director

Urban Transportation Branch 56
G. Halls
Executive Director

Transportation Safety Branch 58
R. Hogg
Director

The *Urban Transportation and Planning Division* is responsible for providing financial assistance to major urban areas, for transportation planning assistance to both the department and municipal authorities throughout the province and for strategic direction planning for the department. The duties are carried out through three major branches: Urban Transportation, Operational Planning and Corporate Planning Services.

Transportation Safety Branch reported under this division until October 1987 when they amalgamated with Motor Transport Services. A brief overview of this branch from April 1, 1987 to October 1987 is included in this submission. All Transportation Safety Branch activities and statistics for 1987/88, however, have been reported in the Motor Transport Services portion of this annual report.

Urban Transportation distributes funding assistance to the 16 Alberta cities and provides an engineering resource to these urban communities.

The Operational Planning Branch provides route location reports and functional design criteria for detailed design work.

Corporate Planning Services monitors provincial traffic volumes, provides detailed traffic volume projections and a co-ordinated approach to departmental strategic planning.

Corporate Planning Services Branch provided strategic planning leadership to the department. Each of the four sections, Corporate Development, Transportation Systems Planning, Traffic Engineering and Data Management Improvements has modified its role in order to support the department's strategic planning thrust.

Corporate Development

The Corporate Development Section conducted and administered the annual planning meetings throughout the department. In support of strategic management, a number of executive briefs were presented with the culmination of this work resulting in the preparation of Strategic Directions '88-90. This document, outlining trends and key departmental thrusts, was discussed by the executive in an open session with senior managers and modifications in directions were made reflecting views expressed. The document provides the background for planning throughout departmental branches.

Corporate Development continued to represent the department on Federal/Provincial working committees and co-ordinated preparation of the Northern Alberta Transportation System Study. Negotiations resulting in $3 million in funding under the Canada/Alberta Northern Development Subsidiary Agreement were successfully completed. The group also represented the department in interdepartmental planning forums, including a Task Force on recreation and tourism access.

A review and update of the department's policy manual was completed. To facilitate policy development, the group sponsored a series of policy writing workshops for departmental managers. Corporate Development continued to develop initiatives in promoting program evaluation. Progress was made on a program evaluation guide for departmental program staff.

Transportation Systems Planning

Transportation Systems Planning conducted planning studies assessing requests for changes to the secondary road and primary highway systems. Staff also continued to provide transportation input to the Environmental Impact Assessments, Development and Reclamation Reviews, Integrated Resource Plans, and other government wide planning processes.

This section initiated the development of a strategic long-range provincial road systems plan. Work carried out in 1987/88 included identifying provincial road system needs for the medium and long term. A computerized road related planning data base was used, with enhancements to the system improving its effectiveness for use in planning by the section and throughout the department.

Traffic Engineering

The Traffic Engineering Section was responsible for monitoring and forecasting travel on the provincial road network. This work supports planning, design, and research activities in the department, other departments, and industry.

The monitoring function involved interviews with 48 617 motorists at 94 sites as to the origin, destination, and trip purpose. Year-round automatic traffic recorders were maintained at 105 sites, while 1191 month-long machine counts were performed at 472 sites. Manual turning movements totalling 642 were conducted at 356 intersections.

The overall growth in provincial travel during the annual period was 3.6 per cent. This was due in part to economic growth and to the Calgary Olympic Games.

Data Management Improvements

The Data Management Section completed its review of existing traffic engineering data processing and practices. Recommendations to change procedures and systems to increase productivity and reduce costs were provided to the Traffic Information System (TIS) Steering Committee in the development of a new data management system.

Operational Planning Branch provides transportation planning services in support of the department's primary highway, secondary and other road construction programs.

Location Services and Design and Environmental Services are the two main sections within this branch. Referral Services is affiliated with the branch's administrative services.

Location Services determines alignments and access control for new and existing primary highways and bridge locations. Assistance is also provided in a similar capacity for secondary and local roads. In addition this section provides airphoto, mosaic and photogrammetric mapping services for the department and computer services for this branch.

Design and Environmental Services is mainly engaged in roadway system studies, larger urban and rural planning studies and determines functional design of intersections, interchanges, four lanes and access control. This section also undertakes roadside landscape design including major rest areas, and carries out environmental assessment and monitoring during project planning, construction and maintenance. The Environmental Design function was transferred to Contracts Engineering Branch effective September 1, 1987 combining all of these services into one area.

These sections liaise with other branches and divisions within the department, planning agencies and the general public in finalizing standards, alignments and specific design features of a project.

The majority of work undertaken in these areas is provided to the department's Engineering and Regional Transportation Divisions for detailed design and project implementation.

Referral Services provides support services to the regions for issuance of development control permits and administers approvals for utility crossings on the primary highway system.

Specific projects, quantities of work completed, and a financial report are outlined in the following under the respective section headings, including the Referral Services Section.

Location Services

Highlights of road corridor and alignment studies, location surveys and photogrammetric services completed within this section follow.

Road Corridor and Alignment Studies

Studies were completed on 47 projects and another 117 projects were underway at the end of the reporting period. Some of the major projects completed were:

- Highway 16 from west of Obed to junction Highway 47
- Highway 13 from east of Buck Lake to junction Highway 2
- Secondary Road 686 from Highway 88 to north of Peerless Lake
- Salisbury Road from junction SR 940 to Forest Reserve Boundary
- Peace River (Daishowa) Pulp Mill Access north of Peace River
- Zama Lake Access from north of Highway 58 to north of Hay Lake.

Location Surveys

Surveys were completed on 12 projects totalling 130 kilometres. These included:

- Secondary Road 753 from Pembina River to the 13th Baseline
- Peace River Pulp Mill Access
- Highway 49 Burnt River Crossing
- Kakwa Falls Access (Part II)
- Highway 16 from east of Marlboro to west of Highway 47.

Survey staff from Regional Transportation assisted in several of the projects.

Photogrammetric Services

During this reporting period more emphasis was placed on high accuracy placement of legal property boundaries on location and design study plans. Details of work performed are:

- 27 495 aerial photography prints obtained
- 8047 kilometres of new photography were obtained by contract
- 81 kilometres of orthophoto mosaics were produced
- 7970 kilometres of standard mosaics were constructed
- 275 kilometres of photo control surveys were completed on 25 projects
- 265 809 acres of contour mapping was completed from 376 triangulated models.

Design Services

Highlights of work completed in this section follow.

Preliminary designs and revisions were completed for 12 interchanges, 25 intersection improvements and 21 access control plans/reports. Thirty projects involving design reviews, utility integration, boundary rationalization and development proposal reviews associated with the Calgary and Edmonton ring roads were completed. Twenty-eight projects including engineering reviews, cost estimates, traffic studies, geometric design research and other miscellaneous projects were completed. Landscape design plans and field assistance were provided for eight projects. Preparation of environmental mitigation plans and reviews were completed for six projects. Projects under study at end of the period numbered 98.

Functional Planning and Preliminary Design

- preliminary design for interchanges at the junction of Highway 1A and Twelve Mile Coulee Road, Highway 15 and 16 near Mundare, Highway 16X and Century Road near Spruce Grove, and Highway 2 at Innisfail.
- major reviews and preliminary designs for intersections Highway 2 and SR 743 west Peace River, Highway 4 and SR 845 at Wilson, Highway 14 and 23 Avenue east of Edmonton, Highway 21 and SR 630 near Sherwood Park, Highway 22 and Pelican Mills access in Drayton Valley, Highway 23 and SR 534 in Vulcan, Highway 28A at Ashmont and Highway 63 at Abee.
- preliminary design and access control reports for improving Highway 1A Calgary to SR 766, Highway 2 Carstairs to Olds, Highway 2 Olds to north of Bowden, Highway 2A from Leduc to SR 616 (east), Highway 4 Lethbridge to Stirling and Highway 16 Vermilion to Kitscoty. Functional planning for the multilaning of Highway 2 from Stavely to Fort Macleod, Highway 2A, SR 616 to Wetaskiwin and Highway 4, Stirling to Coutts is being advanced.
- access control plans and improvements for the primary highway through the urban areas of Airdrie, Canmore, Coalhurst, Hanna, Lacombe, La Corey, Okotoks, Pincher Creek, Ponoka, and Sylvan Lake. Plans for longer term improvements and access control for the highway through the urban areas of Clairmont, Cardston, Cochrane, Hythe, Spirit River, Valleyview and Whitecourt are also being advanced.
- review of engineering designs prepared by others and access requirements for major developments adjacent to primary highways included Highway 1 quarry development near Canmore, Highway 2A and 48 Avenue in Ponoka, Highway 13 Wheat Pool elevator near Wetaskiwin, Highway 28 Grand Centre, and the Highway 40 Jarvis Lake Access.
- selection of site and functional access layout for vehicle inspection stations at Hanna and Slave Lake.
- continued liaison work with Alberta Environment on the rationalization of the transportation and utility corridor including the integration of adjacent land use, development, and utility placements associated with the Edmonton and Calgary ring roads.
- continued liaison work with the cities of Edmonton and Calgary in reviewing and providing input to their designs and standards as prepared by the cities or their consultants for their future ring road.

Landscape Design

- redesign of Edson rest area for longer term requirements.
- redesign of Boys Scout Camp Gardner west of Calgary.
- assistance to the Town of Morinville in the reclamation and development of a former highway borrow pit into a local park area.
- design of campground layout for Blindman River site on Highway 2A south of Blackfalds.
- upgrading of Hornbeck Creek campground on Highway 16 west of Edson.

Environmental Design

- ongoing operational monitoring was carried out on 180 kilometres of roadway on Highway 40, Grande Prairie to Grande Cache.
- report prepared on the environmental aspects of the Federal Environmental Assessment Review for the Yellowhead Highway in Alberta.
- mitigation plans prepared on erosion control for the Elk River Road Location Study.
- participation and environmental input was provided to the Bio-Engineering Research project and development of the Bridge Inspection Manual.

Design And Drafting Services

Design and drafting was completed for 29 Location Study reports, four Access Control reports, and 12 other preliminary design and landscape plans. Approximately 1300 kilometres of highway strip mosaics for access and development control purposes within the department have been updated and completed. Approximately 35 per cent of drafting is now being done on the computer intergraphics system.

Referral Services

Referral Services provides highway planning information and guidance to the Regional and District Officers to assist them in the consistent application of the department's responsibilities under the Public Highways Development Act and the Alberta Planning Act. These responsibilities are primarily in the areas of land use, development and subdivision proposals in the vicinity of the primary highway system. Other branches and external government agencies are also provided with information and planning expertise as required.

Referral Services administers the department's approval of utility placements along the primary highway system under terms of the Public Highways Development Act, Pipeline Act and the Water, Gas, Electric and Telephone Companies Act. Utility companies and owners are advised of planned highway improvements to minimize costly relocation of utilities. Standards for utility installations are developed and maintained to protect the highway plant and user.

During the 1987/88 period 932 utility applications were processed.

OPERATIONAL PLANNING BRANCH

Expenditure For the Year Ended March 31, 1988

OPERATIONAL PLANNING ADMINISTRATION		
Administration and General Office Services	$	405 056
DESIGN AND ENVIRONMENTAL DESIGN		
Administration and Functional Design	$	412 150
Drafting Services		537 460
	$	949 610
LOCATION SERVICES		
Administration and Location Studies	$	1 092 236
Photogrammetry Mapping		145 557
Photogrammetry Airphoto Services		488 122
Reconnaissance, Location & Control Surveys		760 927
	$	2 486 842
REFERRAL SERVICES		
Administration and General Services	$	182 167
	$	4 023 675

During the reporting period Urban Transportation was responsible for allocating approximately $167 million to Alberta cities under the Urban Transportation Program. This program is designed to provide assistance to cities for capital and operating costs incurred in the development and operation of effective roadway and public transit systems. This was the third year of the three year program which became effective on April 1, 1985. Sixteen cities and the County of Strathcona (Sherwood Park) received urban transportation assistance in the 1987/88 fiscal year. The total grants provided to each jurisdiction were as follows.

Airdrie	$	819 800
Calgary		51 702 424
Camrose		951 592
Drumheller		506 906
Edmonton		50 581 036
Fort McMurray		3 027 962
Fort Saskatchewan		983 776
Grande Prairie		2 142 798
Leduc		962 068
Lethbridge		813 840
Lloydminster		4 299 145
Medicine Hat		632 830
Red Deer		42 121 020
Spruce Grove		1 305 541
St. Albert		2 924 253
Wetaskiwin		752 060
County of Strathcona (Sherwood Park)		2 338 558
	$	166 865 609
Multi-jurisdictional Projects		147 158
	$	167 012 767

Details of grants made during 1987/88 for each of the four grant types available under the Urban Transportation Program are outlined in the following section.

Basic Capital Program

This program provides capital grants to support the development of roadway and public transit components of the cities' transportation systems. The government provides 75 per cent assistance for eligible capital projects, up to a maximum of $67.90 per capita to each city.

BASIC CAPITAL PROGRAM

Airdrie	$	708 469
Calgary		43 739 796
Camrose		865 793
Drumheller		452 961
Edmonton		40 305 257
Fort McMurray		2 499 399
Fort Saskatchewan		846 985
Grande Prairie		1 783 733
Leduc		897 231
Lloydminster		716 820
Red Deer		3 679 637
Spruce Grove		1 217 806
St. Albert		2 475 159
Wetaskiwin		685 994
County of Strathcona (Sherwood Park)		2 020 976
	$	102 896 016
Multi-jurisdictional Projects		147 158
	$	103 043 174

As part of the Basic Capital Program described above, special grants were provided to the cities of Calgary, Edmonton and Spruce Grove. Calgary received a special grant of $240 000 for strengthening the bridge at 16 Avenue N.W./Bow River, while Edmonton received a special grant of $1 500 000 for strengthening the Quesnell Bridge. Spruce Grove received a special grant of $410 000 for completion of the Golden Spike Road project.

Major Continuous Corridors and Primary Highway Connectors Program

As an incentive to ensure continuity of a high standard primary highway system through urban areas, the government contributed 90 per cent of the cost of construction of one high-standard, efficient route through each city which connects to the provincial highway system. During 1987/88, the following funding was provided.

MAJOR CONTINUOUS CORRIDORS AND PRIMARY HIGHWAY CONNECTORS PROGRAM

Edmonton (Yellowhead Trail at 82 Street Interchange)	$	3 040 000
Lloydminster (Highway 16)		3 500 000
Red Deer (Railway Relocation/ Major Roadway Project)		37 700 000 *
	$	44 240 000

* The City of Red Deer received $4 850 000 from the MCC Program and an additional $32 850 000 from a special warrant for the Railway Relocation/Major Roadway project.

Public Transit Operating Program

Municipalities with a provincially approved conventional public transit system received $7.76 per capita plus $2.91 per capita for transportation of senior citizens and the disabled. All other municipalities received $2.91 per capita for transportation of senior citizens and the disabled.

PUBLIC TRANSIT OPERATING PROGRAM

Airdrie	$	111 331
Calgary		6 835 682
Camrose		37 105
Drumheller		19 413
Edmonton		6 097 969
Fort McMurray		392 763
Fort Saskatchewan		36 299
Grande Prairie		280 301
Leduc		38 453
Lethbridge		643 508
Lloydminster		30 721
Medicine Hat		450 082
Red Deer		578 229
Spruce Grove		39 817 *
St. Albert		388 954
Wetaskiwin		29 400
County of Strathcona (Sherwood Park)		317 582
	$	16 327 609

* Spruce Grove received an additional grant of $5197 which was 50 per cent of the deficit incurred in a trial Spruce Grove/Edmonton commuter bus service.

Primary Highway Maintenance Program

These grants are provided to assist in the maintenance of primary provincial highway routes within the cities. During the reporting period the provincial contribution was $1940 per lane-kilometre of eligible roadway.

PRIMARY HIGHWAY MAINTENANCE PROGRAM		
Calgary	$	1 126 946
Camrose		48 694
Drumheller		34 532
Edmonton		1 137 810
Fort McMurray		135 800
Fort Saskatchewan		100 492
Grande Prairie		78 764
Leduc		26 384
Lethbridge		170 332
Lloydminster		51 604
Medicine Hat		182 748
Red Deer		163 154
Spruce Grove		47 918
St. Albert		60 140
Wetaskiwin		36 666
	$	3 401 984

Prior to October 1987, the Transportation Safety Branch was the provincial government's traffic safety co-ordinating agency responsible for reducing the number of motor vehicle collisions, injuries and deaths in Alberta.

Through its research, legislation, investigation, inspection and educational activities, the branch developed and implemented programs aimed at the three primary elements of a collision – the driver, the vehicle and the roadway – in order to reduce collision rates and improve safety on Alberta's highway system.

The branch was composed of the Engineering Section, which was responsible for all aspects of transportation safety relating to roads and vehicles; the Traffic Safety Education Section, which endeavoured to reduce the number of collisions through its public education and awareness programs; and the Planning and Program Support Section which was responsible for co-ordinating the branch's comprehensive, planned approach to improving traffic safety in the province and the Alberta Collision Information System.

The branch's activities and statistics for 1987/88 are reported in the Motor Transport Services submission in this annual report.

ALBERTA MOTOR TRANSPORT BOARD

G. Bellinghan
Chairman

During this fiscal year Mr. Gordon Bellingham completed his first year as Chairman, under the new organizational structure. The Board's Secretariat was moved into the Motor Transport Services Division, but continued to provide the required administrative support for the Board, the Chairman, and the six part time Board Members.

The Federal Government introduced its long awaited regulatory reform legislation for all modes of transportation in the National Transportation Act, and the Motor Vehicle Transport Act, 1987, which were implemented on January 1, 1988.

The Motor Transport Board, as it relates to extra-provincial trucking activity, operates under delegated authority from this federal legislation. Throughout the fiscal year the Board prepared for and implemented the new federal regulations on January 1, 1988.

Having taken the lead in the reform process, Alberta has fully implemented the reform criteria prescribed by the federal legislation. Extra-provincial motor carriers need now only meet an entry criteria of fitness/safety/insurance. The Board will grant all applications that are considered to be "in the public interest," giving very high regard to carrier compliance with the new National Safety Code.

Total uniformity in implementing the Motor Vehicle Transport Act, 1987, across Canada, has not yet been achieved, and the Board is providing Alberta's liaison with other provincial governments to ensure that Alberta carriers are receiving equal treatment in all jurisdictions, under the reform process.

During the fiscal year, the Board held 50 weekly meetings to consider new applications, and held 15 Public Hearings, 12 Disciplinary Hearings, four Policy Meetings, and 14 Special Meetings.

The Board will continue its momentum toward full regulatory reform of the extra-provincial trucking industry giving Alberta carriers their best opportunity to operate in the very competitive North American market place.

MOTOR TRANSPORT SERVICES DIVISION

C Procuik
Executive Director

Transport Field Operations Branch 63
R. Pagnucco
Director

Transport Engineering Branch 64
R. Houston
Director

Support Services Branch 65
R. Clarke
Director

Transportation Safety Branch 68
R. Hogg
Director

Planning and Statistics Branch 70
L. Keown
Director

The year 1987/88 was accentuated by change for Motor Transport Services; a new name, a restructured organization, and a renewed commitment to highway safety and protection.

In April 1987 the finalization of the amalgamation of the former Alberta Highway Patrol with Motor Transport Services occurred. This merger eliminated duplication in enforcement and provided a mobile extension to the static vehicle inspection station function. This increased the effectiveness and efficiency of the enforcement of specified federal and provincial highway traffic legislation.

In October the department's Transportation Safety Branch was also merged with Motor Transport Services. This integration resulted in many facets of highway use now being regulated and facilitated from one source. This amalgamation necessitated the consolidation of the Highway Traffic Act and the Motor Transport Act into a potential Users Act. Work was initiated in the spring of 1987 to achieve the consolidation of these Acts for presentation to the Alberta Legislature in the spring of 1989.

These organizational changes and new initiatives provided Motor Transport Services with the ability to develop and maintain programs which ensured a safe motoring environment and protection of the highway infrastructure, while still supporting the social and economic needs of Alberta and Albertans.

In order to deliver its mandate effectively, the integrated Motor Transport Services divided into five branches: Transport Field Operations, Engineering, Support Services, Transportation Safety and Planning and Statistics, each of which offered a variety of programs and support.

A brief overview of the Transportation Safety Branch prior to amalgamation is included in the Urban Transportation and Planning section of this annual report.

Transport Field Operations is the enforcement arm of Motor Transport Services. The purpose of the section is to ensure public vehicle compliance with those Provincial and/or Federal Statutes and Regulations affecting the movement of people and goods on Alberta highways. Although operating under a philosophy of voluntary compliance, and of service and education; the section practices selective enforcement and prosecution in an effort to protect the legal carrier and motoring public. Education, monitoring and enforcement is provided by the:

- establishment of strategically located Vehicle Inspection Stations (VIS)
- establishment of mobile patrols based at VIS
- on road inspection of vehicle and documents
- off highway audits and investigations
- maintaining of a compliance recording system
- conducting of seminars and demonstrations on industry related topics
- maintaining of decentralized permit issuing office
- exchange of interprovincial records
- dissemination of promotional and regulatory material.

During the 1987/88 fiscal year, Transport Field Operations, as a result of Highway Patrol amalgamation, expanded from less than 50 officers to nearly 100, and from four investigators to nine full time investigators and seven assistants. This major expansion allowed Transport Field Operations to ensure consistency in enforcement effort between mobile patrols and permanent vehicle inspection sites.

TRANSPORT FIELD OPERATIONS

ACTIVITY STATISTICS

	Calgary	Lethbridge	Red Deer	St. Paul	Vermilion	Edmonton	Edson	Grimshaw	Grande Prairie	Whitecourt	TOTAL
Vehicles Checked	23 468	36 428	3 269	4 914	5 918	18 147	2 668	2 647	7 020	6 573	111 052
Vehicles Weighed	204 948	133 212	27 909	20 464	60 083	106 214	27 754	18 512	30 798	62 332	692 226
Overloads	1 519	850	401	745	238	1 840	199	791	999	1 771	9 353
Other Offences	179	456	940	237	1 739	2 710	33	1 657	728	866	9 545
C.V.S.A. Inspections	325	318	347	382	340	1 240	213	216	248	414	4 043
Prosecutions	35	83	34	38	38	200	28	101	34	85	676
Investigations	243	134	117	56	26	243	36	3	87	19	961
HRS Mobile Patrol	2 864	2 831	3 100	2 880	2 539	4 707	1 626	2 392	2 301	2 359	27 599
HRS Sale Operation	12 983	16 039	6205	1 910	2 873	11 583	4 295	3 363	4 863	5 242	69 356

Transport Engineering is responsible for developing weight and dimension regulations, and policies and procedures which allow for the equitable balance between highway user needs and the physical capabilities of our roads and bridges, while considering the essentials of public safety.

In order to achieve its goal of "Maximum Use With Minimum Abuse" Transport Engineering:

- initiated road ban orders to protect weakened roadbeds
- issued 11 283 overload permits to a value of $485 080
- issued over 12 000 special and over-dimensional permits accounting for $114 873 in revenue. These permits because of their special nature can only be issued by Head Office staff
- continued their involvement with the Roads and Transportation Association of Canada (RTAC) in an effort to standardize equipment, weight, and dimensional limits across Canada
- implemented a testing program for testing specific transportation equipment where current standards do not apply
- expanded the extended weight program to allow carriers to haul additional weight on selected routes free from bridge restrictions.

The Engineering Branch also provides advice to equipment manufacturers and carriers regarding regulations, equipment design and modifications to ensure regulatory compliance. Also a continual liaison with industry has been established to research new designs and to ensure present and future innovations are in the best interest of all.

Support Services is responsible for providing administrative programs within Motor Transport Services.

Financial Administration

The Financial Administration Section provides effective administrative support services to Motor Transport Services in the area of revenue and expenditure control, records management, and procurement and inventory control.

Financial management systems, controls and reporting procedures were constantly monitored and updated to ensure continued accurate reporting and reconciliation of the over four million dollars generated by the sale of various permits at all field offices throughout the province. An overload permit charge account system was also maintained on behalf of approximately 1000 carriers.

During this period a new fee schedule was implemented for all permits issued for and on behalf of the Motor Transport Board. All permits previously issued free of charge were now assessed a fee, as a cost recovery effort, in order to provide and maintain an effective service.

A new method of fee calculation for overload permits was also developed which eased the administration burden of both the user and the issuer with little change to total costs.

SALES JOURNAL – YEAR END 1987/88

MONTH	MVD FEES	EXTENDED LIC	ADJUST PERMIT	OVER DIM	OVER WEIGHT	OTHERS	CND FUNDS	AMERICAN FUNDS	TRANS	VISA	MASTER CARD	TOTAL FUNDS	ON ACCT	CREDIT	TOTAL FEES
April	$ 888	$ 53 573	$ —	$ —	$ 15 033	$ —	$ 55 201	$ 230	$ 342	$ 11 030	$ 3 035	$ 69 837	$ 104 349	$ 36	$ 174 186
May	1 426	54 605	—	—	16 536	—	54 298	610	363	15 089	2 570	72 930	165 608	278	238 538
June	1 338	61 491	—	—	22 590	—	65 796	10	169	15 949	3 664	85 588	237 463	—	323 051
July	992	56 761	—	—	19 584	—	60 218	—	63	13 512	3 607	77 400	254 319	—	331 719
August	1 064	53 716	—	—	14 745	—	49 148	—	52	16 577	3 800	69 577	227 834	13	297 410
Sept	872	57 826	—	—	26 442	—	66 772	72	86	15 333	2 963	85 226	304 317	—	389 543
Oct	948	53 186	—	—	32 229	—	63 708	102	166	18 190	4 363	86 529	342 856	20	429 385
Nov	840	47 823	—	—	31 298	—	59 164	20	58	17 782	2 995	80 019	279 155	—	359 174
Dec	546	40 233	—	—	254 857	20	47 707	—	91	16 092	3 040	66 930	228 817	—	295 747
Jan	600	53 771	707	51 475	322 541	38 651	83 701	118	98	32 015	7 465	123 397	344 446	—	467 843
Feb	630	54 113	665	33 746	395 840	23 878	48 747	163	194	31 214	4 872	85 190	423 876	—	509 066
March	888	55 866	1 942	50 882	419 472	48 666	70 641	10	102	45 463	8 373	124 589	453 229	—	577 818
	$ 11 032	$ 642 964	$ 3 314	$ 136 103	$ 1 571 167	$ 111 215	$ 725 101	$ 1 335	$ 1 784	$ 248 246	$ 50 747	$ 1 027 212	$ 3 366 269	$ 347	$ 4 393 480

Secretariat

Formally Operating Authority Administration, the Secretariat is responsible for processing operating authority applications and also issuing and renewing intra- and extra-provincial certificates.

The enactment of the Motor Vehicle Transport Act 1987, (MVTA 1987) by the Federal Government, on January 1, 1988, resulted in a number of operational changes affecting the manner in which extra-provincial operating authorities are processed and issued. The overall intent of the MVTA 1987 was to prescribe a system that would make it easier for applicants to acquire extra-provincial operating authority and enter the trucking business. To facilitate this regulatory reform, the Secretariat, in co-operation with the Motor Transport Board, implemented a reverse onus system for processing and hearing applications for operating authority. This process shifted the burden from the applicant to the objector of the application. The onus is then on the objector to prove the granting of the application would not be in the public interest.

The MVTA 1987 also introduced a requirement that would have the applicant satisfy a number of safety and fitness standards prior to the issuance of an extra-provincial operating authority. A process within the Secretariat was developed to ensure that these safety prerequisites were satisfied prior to the granting of the operating authority certificate.

Further accomplishments, include the completion of an automated system for operating authority issuance and control in which all operating authorities issued by the Secretariat are now produced, maintained and made available on a computer system.

EXTRA-PROVINCIAL OPERATING AUTHORITIES PROCESSED 1987/88

	APPROVED	DECLINED	TABLED	WITHDRAWN	CANCELLED
New Applications					
Motor Carrier	325	4	—	3	—
Bus	14	1	—	1	—
Amendments					
Motor Carrier	485	—	61	—	—
Bus	8	1	1	—	—
Transfers					
Motor Carrier	48	—	—	—	—
Bus	6	—	—	—	—
Cancellations					
Motor Carrier*	95	—	—	—	—
Bus	3	—	—	—	—
Temporary Authorities					
Motor Carrier	404	15	2	—	—
Bus	24	—	—	—	—
Reinstatements					
Motor Carrier	8	—	—	—	—
Bus	4	—	—	—	—

** Cancelled for non-payment of prorate fees, no longer needed, dormant authority.*

INTRA-PROVINCIAL OPERATING AUTHORITY CERTIFICATES PROCESSED (BUS) 1987/88

	NO.
Class A Charter Service	90
Class B Charter Service	30
Class C Charter Service	98
Class D Charter Service	34
Intra Industrial Contract Certificates	50
Private Bus Certificates	1025
D Class Restricted Certificates	118
Route	108

INTRA-PROVINCIAL OPERATING AUTHORITY CERTIFICATES (TRUCK) PROCESSED 1987/88

	NO.
New General Merchandise applications	1670
New Exempt Applications	513
Amendments	117
Reinstatements	5
Cancellations (General Merchandise)	752
Cancellations (Exempt)	502

OTHER PERMITS AND CERTIFICATES PROCESSED 1987/88

	NO.
Liveryman's Certificate	402
Drive Yourself Certificate	269
Bus Single Trip Permits	1077
Bus Equipment Exemption Permits	143

Communications and Training

This section is responsible for providing effective and timely communication programs in support of Motor Transport Service's initiatives and programs. During 1987/88 communication efforts were directed at developing and maintaining effective communication channels with affected stakeholder groups to ensure the timely dissemination of information regarding new MTS initiatives. Government agencies, the transportation industry, safety associations, and the public at large were all part of this communication network. The internal communication system was strengthened by the creation of two MTS newsletters; one produced monthly, the other on a weekly basis. This section also responds to invitations from industry and public interest groups to participate in seminars and displays at trade shows, fairs, and exhibitions. During this reporting period this section co-ordinated Motor Transport Services' presence at Truxpo and various fairs and exhibitions throughout Alberta. They were also involved in the design, development, and production of various pamphlets and brochures which supplemented their information dissemination.

The training function is designed to co-ordinate the training and human resource development of MTS specialized employees. During this period this section was extremely involved in the development and delivery of numerous specialized in house courses for Motor Transport Officers. This also included the co-ordination of interdepartmental training, such as Dangerous Goods Inspector Certification Programs and Commercial Vehicle Safety Alliance Inspector Certification.

Computer training was also provided in correlation with the automated programs implemented on the shared Alberta Solicitor General's computer Motor Vehicles System (MOVES).

All managers and supervisors were provided Management By Objective instruction and all attended a Managing Change Course – both specifically designed to meet MTS needs.

Standards & Maintenance

The Standards and Maintenance Section is responsible for the provision of support services in the area of facilities construction and maintenance, uniforms, and general field equipment and supplies. They are also responsible for the liaison with counties, municipal districts and other local authorities.

During this period the section met with councillors and administrators in 48 of the 52 counties and municipal districts throughout the province to ensure an understanding of the operations of Motor Transport Services, and to achieve a consistent application of government regulations and policies. This provides a mechanism to arbitrate disputes in road damage complaints and misunderstandings of permitting procedures between industry and various government agencies, as well as providing a general liaison between the transport industry and the counties and municipal districts. This service extends to meetings with the Alberta Forest Products Association and lumber and pulp mills, to discuss problems and make recommendations and changes for the log haul section of the transportation industry.

The section is also responsible for the maintenance and upgrading of the vehicle inspection stations, portable trailer scales and hand held scales. They are also responsible for the calibration of the static weigh scales maintaining the high standards of accuracy required for federal approval.

The Transportation Safety Branch, the provincial government's traffic safety co-ordinating body, is responsible for reducing the number of motor vehicle collisions, injuries and deaths in Alberta.

Through inspection, legislation and the delivery of educational and informational programs this branch provides programs which ensure the safe transportation of goods and people on Alberta highways.

From April 1 to September 1987, this branch reported to the Assistant Deputy Minister, Urban Transportation and Planning. In October, the Transportation Safety Branch became a part of Motor Transport Services. Besides maintaining its mandate of traffic safety, this branch also became responsible for administering the National Safety Code, a Canada wide program developed to improve the mechanical fitness of commercial vehicles and the driving skills and attitudes of professional drivers.

In July of 1987, the branch co-ordinated the introduction and passage of seat belt legislation in Alberta as well as co-ordinating the accompanying public awareness multi-media campaign.

This branch continues to maintain a close liaison with other professional internal and national traffic safety organizations, while providing expertise to other provincial departments and agencies.

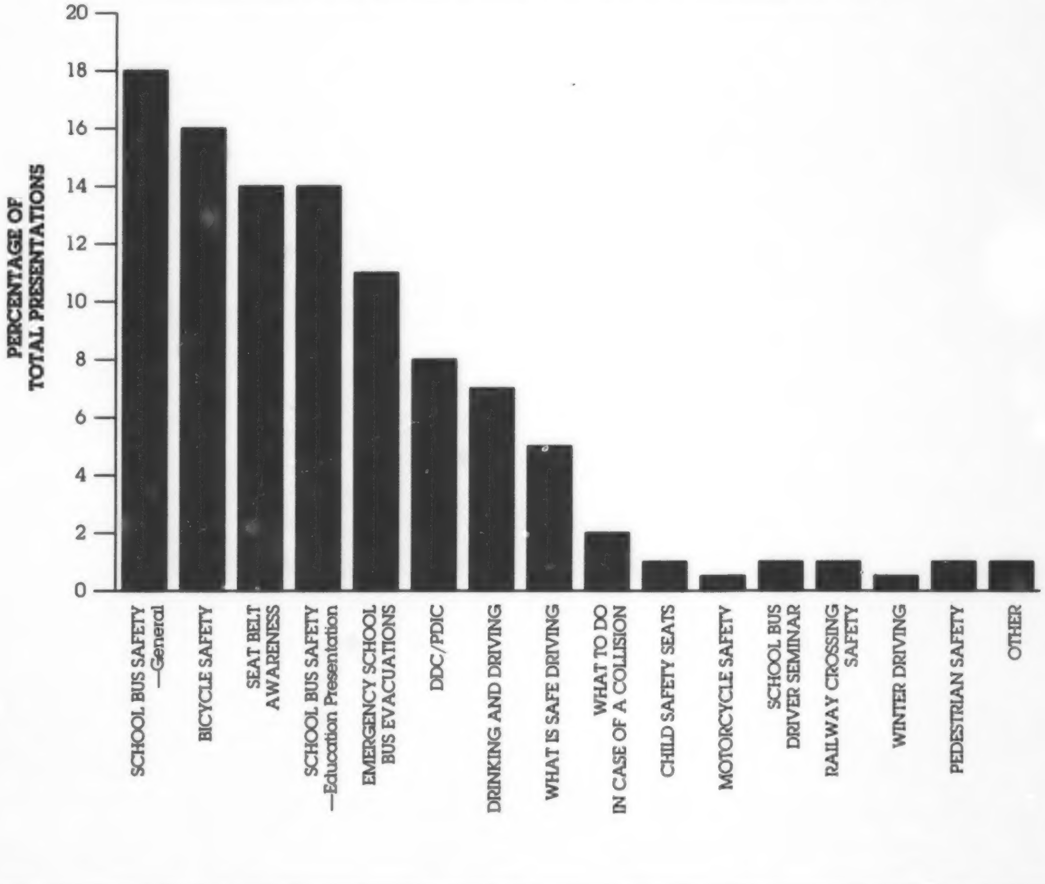
Safety Education Programs

The Safety Education Programs Section is committed to reducing collisions and providing a safe roadway environment through the delivery of appropriate traffic safety programs. These programs target every segment of the population from the senior citizen to children in "Early Childhood Service" programs.

With an emphasis on instilling road safety concepts at an early age, major programs were aimed at elementary aged children. An example is the Emergency School Bus Evacuation Program, where the Safety Education Representatives conducted 479 drills during the 1987/88 fiscal year. It has been through the success of these departmental programs that many school boards in the province now require emergency school bus evacuation drills as part of the school curriculum.

SAFETY EDUCATION PROGRAMS 87/88

PRESENTATIONS GIVEN (percent of total) — APRIL 1, 1987 to MARCH 31, 1988



During the 1987/88 fiscal year, the Safety Education Representatives delivered 2710 traffic safety presentations to 145 946 Albertans. Although students made up the majority of the audiences, there was also involvement with industry, service groups, health units, and associations.

While most of the section's public education program involves providing lectures, Safety Education Representatives were also available to man 179 display shifts in schools, industrial settings, malls, and fairs.

In order to have a better understanding of the circumstances surrounding a school bus crash, Safety Education Representatives conducted 227 interviews with school bus drivers who were involved in all types of school bus collisions.

Safety Education Representatives are listed in newspaper ads sponsored by the department as resource persons to discuss questions relating to the Highway Traffic Act and road safety concerns. Questions referencing these areas resulted in the SER's responding to 4778 incoming telephone calls during this fiscal period.

Crash Investigations

From April to September of 1987 the Crash Investigation Program was under the auspices of the Engineering Section of the Transportation Safety Branch. In October this group was transferred to Motor Transport Services where it continued its detailed crash investigation and review of motor vehicle reports to help identify and rectify highway collision-prone locations.

During this fiscal year indepth studies relating to road factors, vehicle standards and driver conditions were carried out in 66 severe motor vehicle collisions, six fatal train/vehicle crashes, nine special project intersection collisions, and 255 school bus collisions. Findings from these investigations were used to continue the branch's efforts in promoting traffic safety, seat belt usage and to monitor the effectiveness and/or possible defects in seat belts and child safety seats in serious or fatal collisions. Vehicle factors encountered, continue to support the need for upgrading of vehicle maintenance and inspection programs. In nine presentations designed to improve school bus safety, approximately 700 school bus drivers, supervisors, school division and municipal authorities were provided with traffic safety related information derived from various investigations. This fiscal year has seen growth in the use of the section as a resource for collision and traffic safety related information by local government, the transportation industry, operators and private citizens.

Vehicle Inspections

During the first part of the fiscal period the Vehicle Inspection Program was divided between Regional Transportation and the Engineering Section of the Transportation Safety Branch. In October of 1987 this program came under the direction of the Transportation Safety Branch of Motor Transport Services.

To ensure road user safety, this section is involved in the continual monitoring and inspection of commercial vehicles and certified inspection stations. Major emphasis was placed on the adherence of the bus owners and inspection stations to the requirement of bus safety programs. Commercial trucks, trailers, and tractors were inspected for system defects at government vehicle inspection stations, selected inspection sites and at the carriers' facilities. With the assistance of regional staff, 2976 school buses, 188 motor coaches and 14 143 commercial vehicles were checked. Also 1603 bus inspection stations were monitored for compliance with inspection procedures and mechanic certification.

During this period a Preventive Maintenance Program for Alberta commercial trucks was developed and the Commercial Vehicle Safety Alliance (CVSA) Mechanical Inspection Program was implemented, which provided a standardized system of inspection and certification. This section was also involved in the training and certification of Transport Officers as CVSA Inspectors which greatly increased inspection capabilities.

This new branch is comprised of the Motor Transport Services research group and the former Transportation Safety Branch, Planning and Program Support Section. It is responsible for the division's planning, research, business and analysis, policy development, and statistical operations, especially the Alberta Collision Information System (ACIS).

This collision reporting, analysis, and information resource system provides the basis for development of traffic safety countermeasure programs as well as improvements to the primary highway system. During the 1987/88 reporting period, there were approximately 100 000 reported traffic collisions which is a .03 per cent increase from 1986/87. There were approximately 8500 collisions on the province's primary highway system.

In addition to providing an in house consulting and program support service to assist divisional operations, the following projects were completed during the reporting period:

- evaluation of the effect of Alberta's mandatory seat belt legislation
- co-ordination of the public awareness/information component of the seat belt legislation program
- assessment of the effects of enhanced enforcement of vehicle weights and dimensions, particularly subsequent reductions in road damage
- evaluation of the issuance of intra-operating authorities for commercial vehicles in Alberta
- development of traffic safety educational materials for use by the Safety Education Representatives
- co-produced a school bus safety film with Alberta Education for use in the province's schools, entitled "Excuses, Excuses"
- development of a divisional performance monitoring system
- revision of Motor Transport Services Business Plan.

The branch was also engaged in an ongoing evaluation of the impacts of the implementation of the National Safety Code for Motor Carriers and Selective Traffic Enforcement Programs on highway safety in Alberta.

The Field Services Unit conducted 354 studies. Of these studies 291 were monitoring studies which were done at the request of the department's Engineering Services. Specific locations on primary highways and secondary roads were monitored on an annual basis to evaluate existing speed limits. Sixty-three were special studies done at the request of either Engineering Services or municipalities to assess speed limits in urban areas.

The unit also conducted vehicle and pedestrian movement at 212 locations throughout the province. Frequently, particular manoeuvres were studied to develop a more comprehensive profile of the intersection concerned.

Thirty-two locations were filmed or video taped to better illustrate safety concerns at specific locations and 16 railroad crossings were surveyed for possible increased protection. Photographs were taken at the crossings to review signing and site distances.

UTILITIES DEVELOPMENT DIVISION

D. Shillabeer
Assistant Deputy Minister

Gas Distribution Branch 73
T.K. Brown
Director

Municipal Utilities Branch 77
M. Znak
Director

The *Utilities Development Division* is responsible for the implementation of programs and policies related to the capital construction of rural gas systems, municipal water supply and sewage treatment facilities, and farm water transmission systems. The division consists of two branches: Gas Distribution and Municipal Utilities.

The Gas Distribution Branch is responsible for the administration of the Rural Gas Program which provides funding to rural gas distributors for the construction of natural gas systems. The branch provides technical, financial, business advisory services and regulatory services related to gas supply, pipeline construction, utility operation, gas measurement and franchise areas.

The Municipal Utilities Branch administers five water and sewage programs which provide funding to municipalities for the capital cost of constructing water supply and sewage treatment facilities, and for costs related to the development or expansion of water and sanitary sewage works to accommodate specific agricultural processing industries. As well, the branch administers grants to farmers and ranchers in the construction of farm water transmission systems. The branch also provides technical and financial advisory services to assist farmers in developing their systems and to municipalities in the planning and implementation of water and sewage projects and assists in identifying the future needs of municipalities.

The Gas Distribution Branch delivers a variety of technical, regulatory, financial and business services to rural gas distributors. These services are provided through three sections:

Construction and Operations

The functions of the section encompass the following area:

- review and approval of construction projects
- determining grant eligibility for capital projects
- inspection of construction and operations in rural gas utilities
- gas supply operations and wholesale gas measurement accuracy
- materials quality management.

The 1987/88 period featured the continuing trend towards smaller construction projects as the construction phase of the Rural Gas Program reaches maturity. Approximately 750 construction approvals were processed during the period to cover the construction, replacement and upgrading of pipelines and plants in the program.

Operations and maintenance practices in rural gas utilities remained a high priority area for the section as it continued to stress safe and reliable operating procedures to utilities.

Technical Services

With the aid of electronic data processing systems, the section provides a variety of technical services to rural gas distributors and to the branch including:

- franchise administration
- administration and development of plant location records for gas utility operating purposes
- administration of pipeline operating licences
- development of technical standards
- administration of mapping systems for low pressure pipeline data as a public information service.

During 1987/88, the section continued with a number of long term automation projects using computer-assisted drafting to create mapping and data systems which will be much more efficient, effective and responsive to changes. Included in the automation program is a two year project to recreate franchise plans and overhaul franchise area approvals into a more streamlined and accurate format.

The section initiated and completed a number of special projects during 1987/88 including:

- a program to upgrade the quality of pipeline surveys for plant location records
- a study on rodent damage to buried plastic gas pipelines
- revisions to the technical standards and policy manuals for the Rural Gas Program.

Business Services

The section fulfills the following service and administrative functions:

- business advisory services
- capital cost reviews and administration of capital grants
- compilation of program statistics.

The business analysts provide a financial and business management service to rural gas distributors and provide information and advice to the general public on matters relating to natural gas utilities. During the year the analysts have continued to stress the fundamental need for sound financial planning and control. Greater emphasis has been placed on the distributors' responsibility for funding an increasing portion of their construction programs as well as their accountability for cost control.

Capital cost reviews are performed by the business analysts to identify those costs eligible for grant support. Grants offset a portion of system construction cost and are processed by the section. During the year a total of $12 690 000 was paid out in grants. The number of payments was down sharply from 393 in 1986/87 to 270 in 1987/88 reflecting the streamlined construction approval process.

Collection and compilation of statistics of costs, installations, and grants continued throughout the year. Significant statistics respecting the Rural Gas Program for the current year and on a cumulative basis from commencement of the program in 1973 are presented below.

RURAL GAS PROGRAM STATISTICS

Natural Gas Service Installations by Rural Gas Distributors

	Cumulative to March 31, 1987	1987/1988	Cumulative to March 31, 1988
Rural	90 201	2 471	92 672
Urban	17 440	578	18 018
Commercial	6 145	325	6 470
Irrigation	4 953	82	5 035
Grain Dryer	1 137	73	1 210
	119 876	3 529	123 405

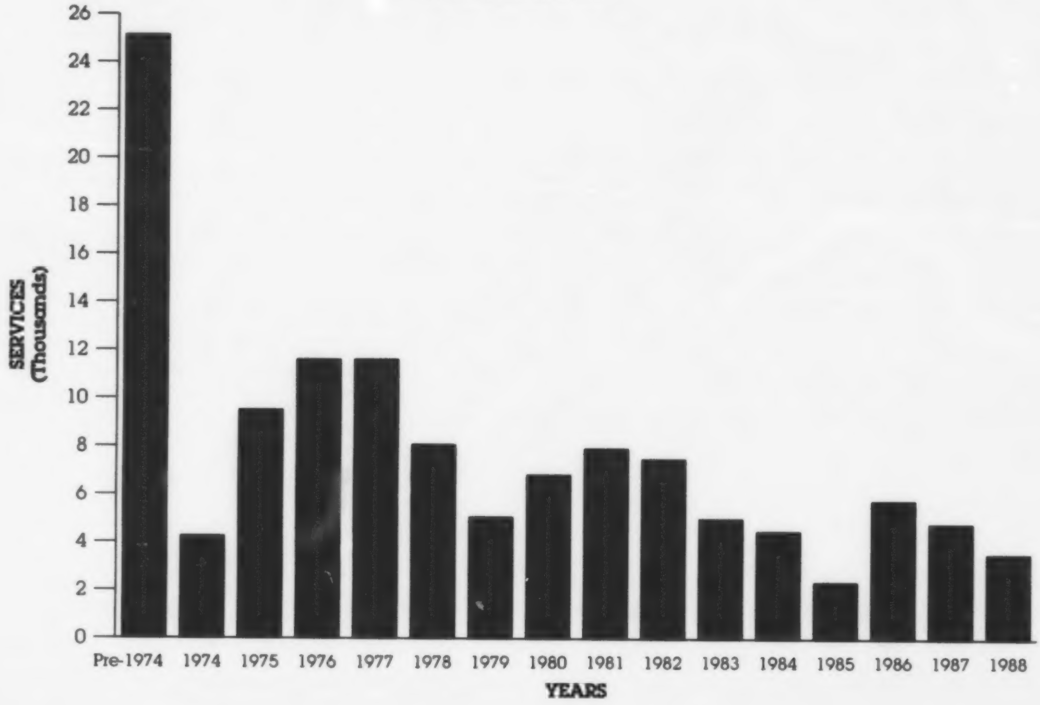
Grants Issued Under the Rural Gas Program

Cumulative to March 31, 1987	1987/1988	Cumulative to March 31, 1988
$ 328 719 860	$ 12 690 365	$ 341 410 225

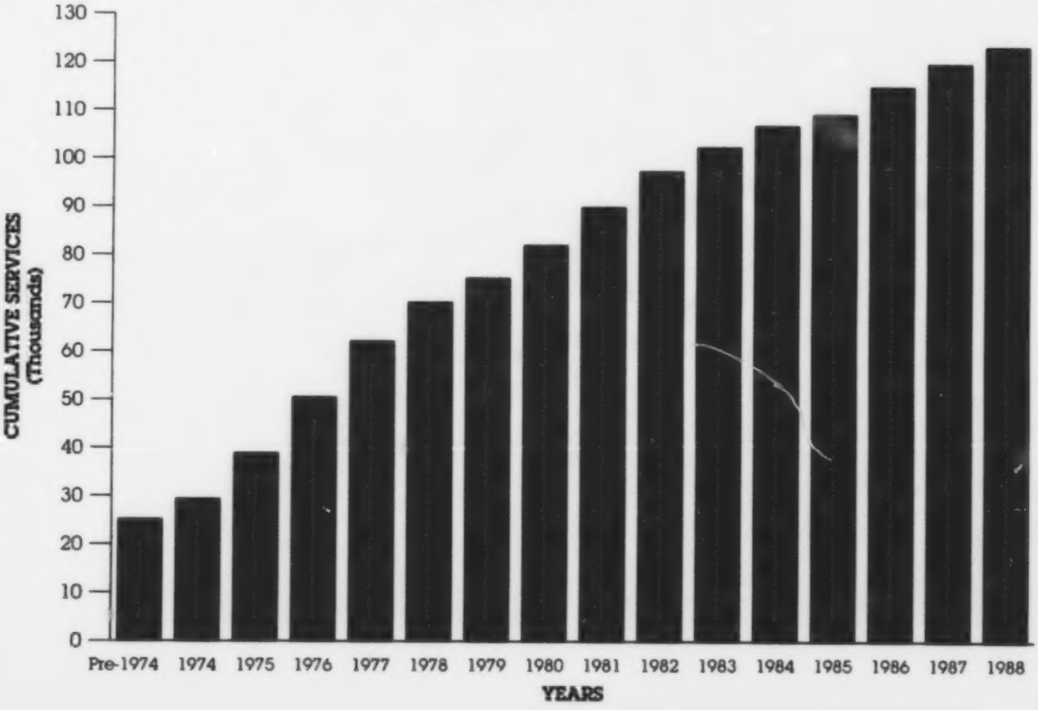
Kilometres of Pipeline Installed in Rural Natural Gas Distributor Systems

	Cumulative to March 31, 1987	1987/1988	Cumulative to March 31, 1988
Polyethylene	81 266	2 207	83 473
Aluminum	5 485	10	5 495
Steel	2 204	22	2 226
	88 955	2 239	91 194

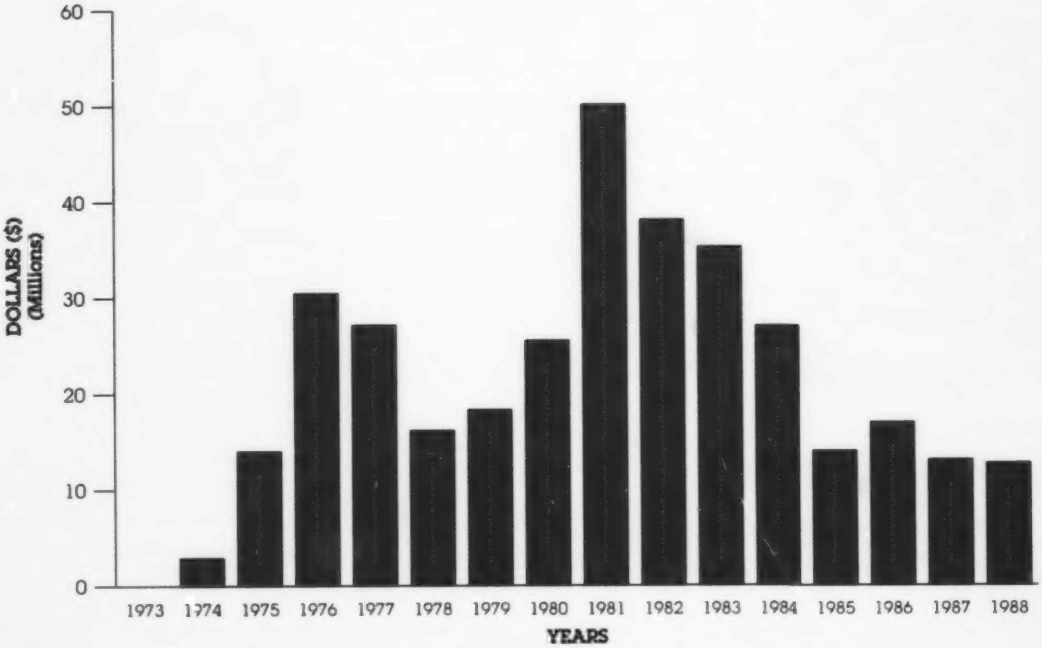
YEAR BY YEAR RURAL NATURAL GAS SERVICES UNDER THE RURAL GAS PROGRAM to March 31, 1988



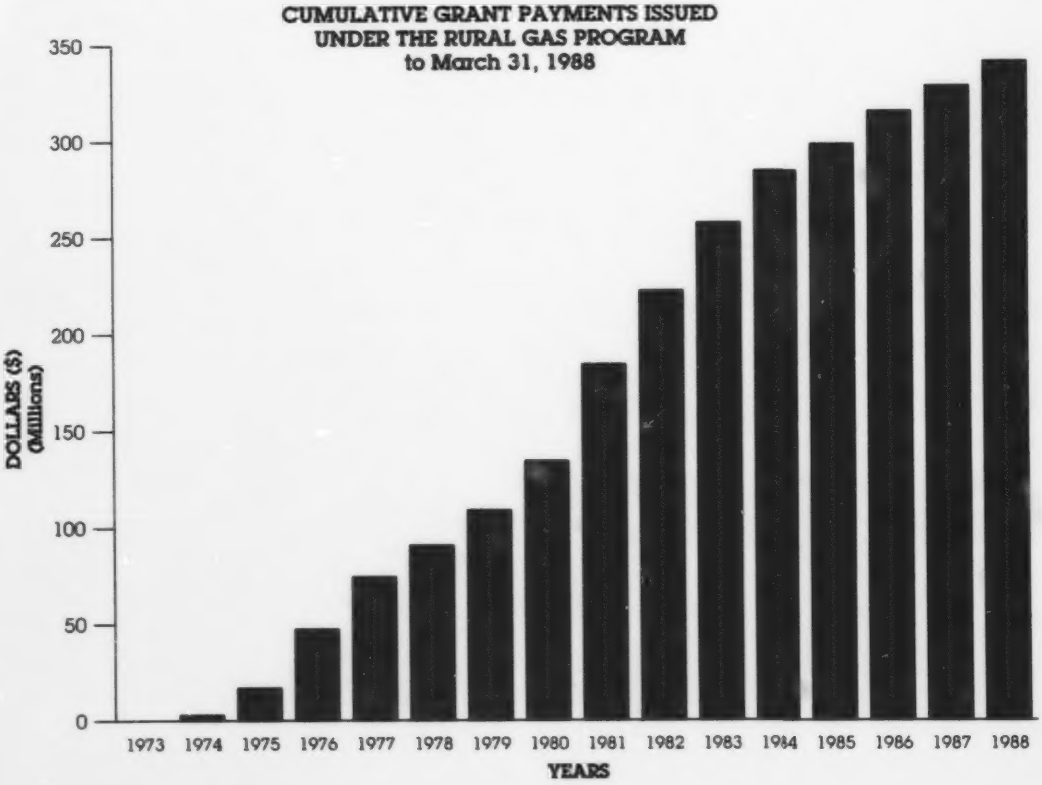
CUMULATIVE RURAL NATURAL GAS SERVICES UNDER THE RURAL GAS PROGRAM to March 31, 1988

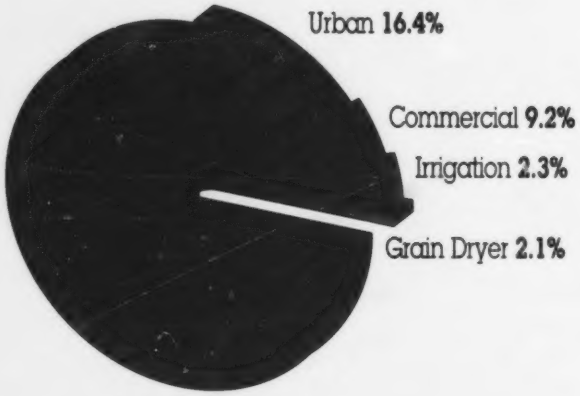


YEARLY GRANT PAYMENTS ISSUED UNDER THE RURAL GAS PROGRAM to March 31, 1988

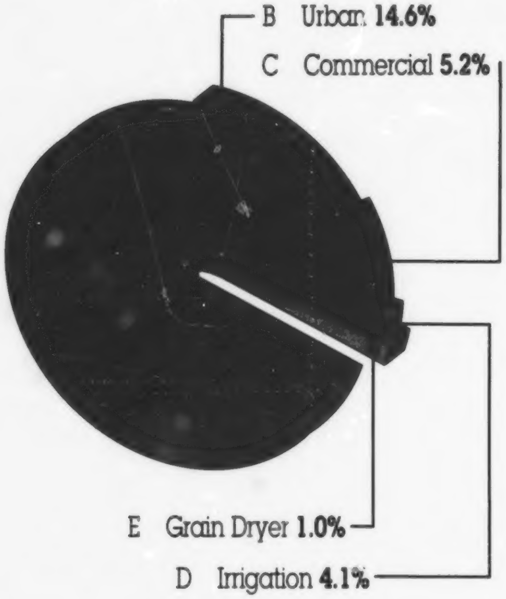


CUMULATIVE GRANT PAYMENTS ISSUED UNDER THE RURAL GAS PROGRAM to March 31, 1988

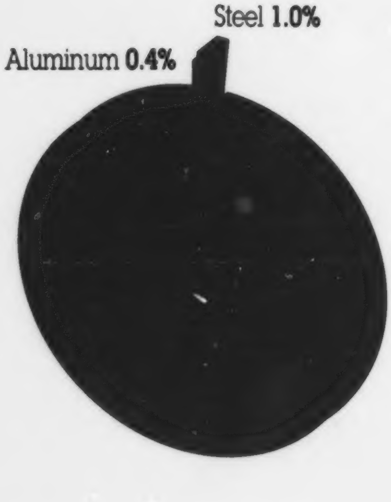




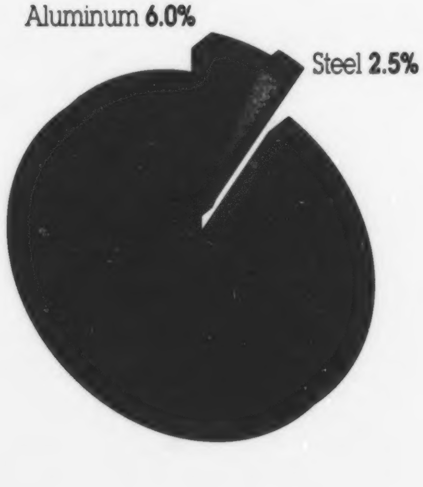
Rural Natural Gas Services by Type
For the 1987/88 Fiscal Year



Rural Natural Gas Services by Type
Cumulative to March 31, 1988



Pipeline (km) Installed in Rural Gas Systems
In 1987/88



Pipeline (km) Installed in Rural Gas Systems
In Rural Gas Systems to March 31, 1988

During the 1987/88 fiscal year the Municipal Utilities Branch continued to provide advisory, technical and financial support services to Alberta municipalities for the development of water supply and sewage treatment facilities and to farmers and ranchers for farm water transmission systems.

The Water and Sewage Programs Section continued to maintain an effective liaison with municipalities and provided technical expertise to assist in the planning and implementation of municipal water and sewage projects and assisted in identifying the future needs of municipalities. Staff acted as project managers for regional systems under construction during the year. The section also administered the Rural Utilities Act as it pertains to water and sewage cooperatives. Activities included approving new incorporations and reviewing annual financial returns.

The Contracts and Grants Section processes contracts and grant payments for all the programs administered by the branch. Staff provided information and guidance to municipal administrators and consultants with respect to record keeping for projects, management of cash flow, and auditing procedures.

Staff participated actively in municipal and technical conferences during 1987/88. Attendance at the Alberta Urban Municipalities Association Conference, Alberta Association of Municipal Districts and Counties Conference, Improvement Districts Association of Alberta Conference, and the Western Canada Water and Sewage Conference, provided staff the opportunity to obtain updated information and to meet with municipal officials to discuss their needs with respect to water and sewage facilities.

Alberta Municipal Water Supply and Sewage Treatment Grant Program

- Provides up to 75 per cent assistance to municipalities in the construction of municipal water supply and sewage treatment works.
- During 1987/88, 159 projects were approved in 129 municipalities totalling some $29 million in project costs and approximately $17 million in grants. An approximate total of $35 million was expended during the year for new projects as well as for projects commencing in previous years.
- Grant funding was also provided in some cases for preliminary engineering studies to assist municipalities in evaluating their needs prior to undertaking any major water and sewage upgrading activities.

Agricultural Processing Industries Grant Program

- Provides funding to assist municipalities with the development of expansion of their water and sewage facilities to accommodate agricultural processing industries.
- During 1987/88, seven new projects were approved with total project costs of $2 million and grants totalling approximately $2 million.

Regional Utilities Program

- Under this program, the department undertakes the construction of multi-municipal water/and or sewage treatment facilities which are later cost-shared with the municipalities who then take over operation and maintenance of the facilities.
- During 1987/88, activities centered around the completion of the Capital Region Sewage System, now serving 13 municipalities in the Edmonton area.
- Construction commenced on the Morinville Sewage Transmission System, which when completed in 1989, will connect to the Capital Region Sewage System.
- An approximate total of $4 million was expended for construction, engineering and land costs, as well as approximately $5 million in grants.
- Implementation of the Henry Kroeger Water Supply Project began in 1987/88. The water supply line will provide a secure water supply to municipalities in the Oyen/Youngstown/Hanna corridor.

Northern Supplementary Fund

- Under this program, northern communities within the jurisdiction of the Northern Alberta Development Council, are eligible to receive grants for water and sewage works. This program is limited to northern communities where, even with local revenues and other sources of funding, the costs of constructing adequate water and sewage facilities are far in excess of the provincial norm.
- During 1987/88, eight projects were approved for funding. Total grant expenditures totalled $2 million.

Alberta Farm Water Grant Program

- This program provides financial assistance to Alberta farmers and ranchers for the development of permanent farm water transmission projects.
- During the 1987/88 year funding was approved for 710 new individual projects and 10 group projects.
- Since the onset of this program in September 1985, over 3000 individual farmers and 54 groups have been assisted representing total grants of some $16 million.
- Technical assistance was provided to all applicants, with special emphasis on group initiatives. Department staff attended preliminary meetings, assisted in developing feasibility studies and conceptual designs, and once construction had commenced, provided groups with technical assistance and inspection services.

UTILITIES PLANNING AND SUPPORT DIVISION

J. Zatko
Assistant Deputy Minister

Gas Alberta Branch 81
W. Brown
Director

Rebates Branch 83
G. Breckenridge
Director

Rural Electric Branch 84
J. Mann
Director

Utilities Planning and Analysis Branch 80
L. Charach
Director

The *Utilities Planning and Support Division* consists of four branches as follows. Highlights of the reporting period have been noted.

- Planning and Analysis Branch provides analysis and advice to assist the government in decisions on utility policies and programs. During 1987/88 the Small Power Inquiry was undertaken by the Energy Resources Conservation Board and Public Utilities and a report presented to government. The Planning and Analysis Branch co-ordinated a review of the report, and development of policy and program options to facilitate electricity production by small independent generators. The government endorsed the results of the Inquiry and, in the 1988 spring session of the Legislature, introduced the Small Power Research and Development Act to provide incentives for projects using renewable resources.
- Rural Electric Branch administers rural electrification loan and grant programs and services. The 1987/88 fiscal year was the first year of the new REA Capital Rebuild Program and 21 loans were issued to REA's for system rebuild and refinancing. Demand remained strong for loans for new electrical services on farms, with 1435 loans processed. Also during the year the Isolated Communities Program was extended to Metis Settlements and four settlements benefited from grants for electrical services.
- Gas Alberta Branch provides gas brokerage, retail billing and other support services to rural gas distributors. The renegotiation of gas purchase contracts, under deregulated markets and prices, was completed in 1987/88. Rural gas distributors benefited from a 26 cents per gigajoule reduction in the wholesale gas rate. Plans were also developed and outlined to rural gas distributors to fully recover most administrative and other costs through Gas Alberta's wholesale gas and retail billing rates commencing in 1988/89. A committee was set up with the Federation of Gas Co-ops to assist in rate and energy supply decisions.
- Rebates Branch delivers four rebate programs which reduce heating fuel costs for select residential, farm and other purposes. These programs have scheduled sunset dates and are periodically reviewed. During 1987/88 the government took decisions to lapse the Natural Gas Price Protection Plan at year end as it is no longer required, and to extend the programs for agricultural producers, remote areas and senior citizens. Over 104 000 individual grants totalling approximately $14 million were made under these latter three programs during the year.

Planning and Analysis provides analytical support and co-ordination for the development and evaluation of the Utilities' policies, programs, and planning activities.

During the year the branch managed and participated in a number of activities highlighted by the following:

- results were reviewed from the Small Power Inquiry conducted by the Energy Resources Conservation Board and Public Utilities Board. The aim of the Inquiry was to provide government with recommendations for pricing, access and other matters that would facilitate the generation of electricity by small units but not unduly impact rates for electricity consumers. Analysis of the Inquiry's results suggested that incentives would be required to encourage small power in the near term in Alberta. In the 1988 spring session, the Legislative Assembly approved the Small Power Research and Development Act which makes available an incentive price for small projects using renewable resources.
- grant requests were analyzed including support to the Small Power Producers Association of Alberta for participation in the Small Power Inquiry and to the 1987 Canadian Wind Energy Association Conference in Calgary.
- support was provided to an interdepartmental study group on the Alberta Electric Energy Marketing Agency (AEEMA). Submissions from various stakeholder groups were solicited and reviewed during the year. After year end, decisions were made by government to amend the AEEMA regulations to finetune the process, and to extend the AEEMA shielding grant program through 1990. These decisions help address concerns about potential rate increases resulting from the commissioning of major new power plants in the upcoming years.
- the branch co-ordinated a provincial response to the Federal Government on proposals for the National Energy Board regulation of electricity exports.
- financial, economic and policy analysis was provided for the evaluation of Utilities' programs and eligibility criteria. Analytical input was provided for the review of heating fuel rebates programs which had sunset clauses in legislation or regulations. The government approved extensions to some programs, modifications to others, and consistent with reduced natural gas prices, the lapsing of the Natural Gas Price Protection Plan.
- briefings on various utility issues were prepared including Energy Resources Conservation Board and Public Utilities Board regulatory decisions, and regulatory trends in other jurisdictions.
- the branch co-ordinated Alberta's input to national and international forums and participated in various committees and task forces. These included ongoing participation in an Energy Modeling Forum on North American electricity markets and trends, representation on an interdepartmental committee on trade and on the departmental Task Force on Restraint.
- the branch's computerized database on historical trends in electricity and natural gas rates, and forecasting models were enhanced.

The Gas Alberta Branch delivers a variety of financial and administrative support services to rural gas distributors through two sections.

Gas Alberta

Gas Alberta acts as "gas broker" under the Rural Gas Act and is responsible for the economical and efficient supply of natural gas to rural gas distributors throughout Alberta. Through this brokerage service, rural gas co-operatives and other rural distributors benefit from uniformly priced and secure gas supplies. Gas purchases and deliveries are financed through the Gas Alberta Operating Fund and distributors are assessed a wholesale gas rate for their gas supplies.

The gas brokerage operation encompasses the management of gas purchases and sales including supply and pricing strategies, the administration of contracts, and financial control and accounting for the Gas Alberta Operating Fund.

Gas Alberta also offers rural distributors an optional retail billing service. Centralized billing allows these distributors and their customers to benefit from economies of scale as well as expertise in gas measurement and billing. Distributors who participate in the billing program are assessed a charge for this service.

Through the retail billing service the branch offers both a full billing service and a Special Billing Program. Distributors on the latter program obtain meter readings and payments directly from their customers and use Gas Alberta only for processing invoices. They maintain more control over customer accounts, can improve cash flow and have increased customer contact.

Highlights of the 1987/88 year included:

- the management of natural gas purchases and sales to rural gas distributors totalling 13.9 million gigajoules/(GJ) with a value of about $24 million, including delivery costs.
- a seven per cent decrease in the volume of gas sold. Warmer than usual winter temperatures resulted in reduced heating load demands for natural gas.
- completion of the renegotiation of existing purchase contracts under deregulated natural gas prices and markets, which came into effect in the previous year. Rural gas distributors as a result benefited from a reduction of 26¢/GJ in Gas Alberta's wholesale gas rate.
- continued interest in the Special Billing Program with two additional distributors joining the program during the year.
- progress on the development of a new computerized retail billing system which will enhance the economy and efficiency of this service for rural distributors.
- the addition of 24 distributors to the Meter Information System which is designed to provide inventory control and reporting of distributor owned gas meters. The system aids distributors in complying with technical and reporting requirements of the Federal Department of Consumer and Corporate Affairs.
- the development and presentation of plans to rural gas distributors to fully recover most administrative and other costs of the gas brokerage and retail billing services commencing in 1988/89. These costs have been partially recovered to date through the wholesale gas and retail billing rates. A committee was also established with the Federation of Alberta Gas Co-ops to assist in rate and energy supply decisions.

Gas Contracts and Co-op Support Services

This section administers the government-guaranteed borrowings for rural gas co-operatives, provides a utility right-of-way registration service, and administers a number of grant programs. The section manager serves as Director of Co-operative Activities supplying advice to gas co-ops on legislative and regulatory matters.

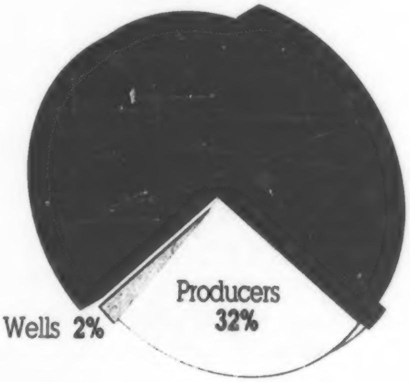
Highlights for the 1987/88 year included:

- the guarantee of borrowings totaling $652 447 by natural gas co-operatives, supported by lien notes under provisions of the Rural Utilities Act. These borrowings are used by gas co-ops to develop their distribution systems. At year end $3 230 700 in guaranteed loans were outstanding, a decrease of $401 077 from the previous year. Thirteen audits of lenders with outstanding government guaranteed loans to co-op members were also conducted.
- the preparation of 5772 rights-of-way, easement and consent-of-occupant (Crown Land) forms for gas co-ops and counties. Two franchise audits for utility rights-of-way and 46 infill audits were also completed.
- the removal from the Corporate Registry of the Kew Ridge Gas Co-op Ltd., East Leduc Gas Co-op Ltd., Athabasca Gas Co-op Ltd., and West Sturgeon Gas Co-op Ltd., as these distribution systems are now owned and operated by a utility company.
- the provision of grants totaling $1 474 680 to 63 rural municipalities under the Utilities Officer Grant Program.
- the granting of $131 522 for the purchase or rental of propane/fuel oil tanks for 558 households. These Propane/Fuel Oil Tank Grants assist residents without access to a natural gas distribution system.

Gas Alberta Summary Statistics

	1983/84	1984/85	1985/86	1986/87	1987/88
Gas Brokerage Service					
Rural Gas Distributors Served	86	87	90	90	91
Gas Delivery or Sales Points	643	666	685	693	698
Gas Suppliers	33	35	35	37	43
Gas Volume Sold (Millions of Gigajoules)	14.2	16.1	17.2	15.0	13.9
Retail Billing Service					
Rural Gas Distributors on the Service	52	52	52	52	55
Customers Served	33 300	34 926	34 446	34 570	35 843

GAS ALBERTA OPERATING FUND

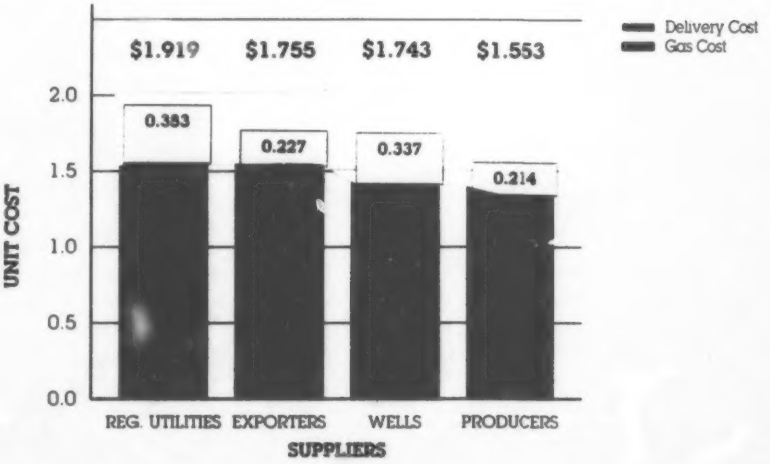


GAS ALBERTA OPERATING FUND

Total Gas Purchase in 1987/88

Suppliers		Thousand of GJ
Reg. Utilities:		3 675.2
N.U.L.	2 274.0	
C.W.N.G.	1 381.4	
I.C.G.	19.8	
Exporters:		5 524.6
TransCanada	2 992.9	
Pan-Alberta	1 149.7	
A. & S.	602.4	
Westcoast	281.1	
Inter-City	197.8	
Consolidated	182.7	
Enron	118.0	
Wells:		272.3
Producers:		4 454.7
Total		13 928.8

Unit Cost Analysis of Gas Supplies in 1987/88



During the 1987/88 fiscal year the Rebates Branch administered the following four rebate programs, which reduce the cost of heating fuel used in select home heating and other purposes. These programs, which have scheduled sunset dates by legislation, regulation or policy, were reviewed during the year and decisions were taken by government on their sunset and renewal.

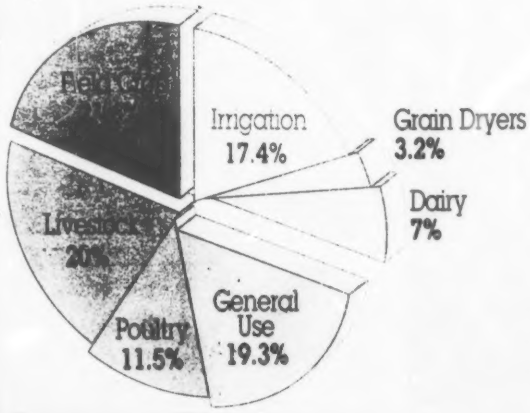
Natural Gas Price Protection Plan

- introduced in 1974 the plan provided over $1 billion in natural gas rebates to Albertans. Rebates were made directly to utility companies, and in turn, were reflected in lower rates to consumers. The plan shielded Alberta consumers during the period of rising natural gas prices.
- the deregulation of natural gas markets and implementation of market sensitive pricing made the plan redundant. The Natural Gas Price Protection Plan lapsed on March 31, 1988.

Primary Agricultural Producers Rebate Program

- rebates under this program are available to consumers who use natural gas in primary agricultural production. Examples of eligible operations include field crops, livestock, dairy and poultry farms, greenhouse (including ornamental), irrigation, grain dryers, sod and peat moss farms and alfalfa processors.
- the program was recently extended to December 31, 1988.
- during 1987/88, 4137 applications were processed resulting in rebate payments totaling $2 616 638. On average, eligible primary producers received $632 in benefits under the program.

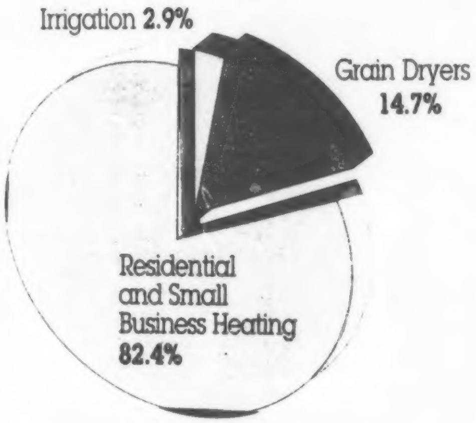
Rebate Payments by Type of Use



Remote Area Heating Allowance Program

- residential, farm, community and small business consumers are eligible for this rebate if they use heating oil or propane because natural gas service is not economically available. The program reduces the cost of these heating fuels by up to 35 per cent.
- the program was renewed in 1987/88 and extended to December 31, 1990.
- during the year, 6008 applications were processed. Rebates totaled $1 862 500 for an average of $310 per application.
- over 27 000 Albertans have benefited from this program since its introduction in 1980. Many residents in remote areas received rebates under this program while natural gas lines were being extended to their locations through the Rural Gas Program.

Rebate Payments by Type of Use



Senior Citizens Home Heating Protection Plan

- senior citizen homeowners receive $100 annually through this program to help with home heating costs regardless of the type of fuel used. Most households are mailed a cheque automatically without the need for completing an application. The rebate is also provided to widows and widowers 55 years of age or over who are receiving a pension under the Alberta Widows' Pension Act.
- introduced in 1982, the program was recently extended to the end of the 1990 calendar year. Rebates totaling more than $52 million have been paid since the program was implemented.
- during 1987/88, 94 617 Alberta seniors received $100 rebates for their heating costs during 1987 calendar year.

The Rural Electric Branch administers the rural electrification loan and grant programs which assist in providing electric services to rural Albertans. The branch director fulfills the statutory duties of the Director of Rural Electrification Associations (REA's) as provided by the Rural Utilities Act.

Rural Electrification Program: Lending Activities

Low-interest (Part One) and interest-free (Part Two) loans are made from the Rural Electrification Revolving Fund for new farm electrical services and REA capital rebuild.

Highlights of the 1987/88 lending activities are as follows:

- for new farm electrical services, 1435 loans were processed and funded totaling $6 096 542.
- twenty-one loans were issued for REA capital rebuild and refinancing for $507 510 and $101 504 respectively.
- of the loans made for new electrical services, $4 357 786 carry fixed repayment schedules and bear interest at three and one-half per cent. These (Part One) loans are secured by a lien on the farm property. The balance of $1 738 756 was non-interest bearing (Part Two) loans made to help reduce the cost of the more expensive electrical services for farmers. Repayment of Part Two loans is contingent on additional services being connected to the facilities that benefited from these interest-free funds.
- this was the first year of the new REA Capital Rebuild Program through which REA's can borrow up to 30 per cent of their rebuild and system improvement requirements. These loans are interest-free and repayable over a term of 25 years. This new initiative helps REA's finance part of their rebuild investment over the life of the facilities, rather than in advance from levies on members. It reduces the cost of rebuild for REA members and enables REA's to look to the future with greater financial certainty. With the introduction of the loan program for REA rebuild, grants to REA's based on 40 per cent of the outstanding interest-free (Part Two) loans were discontinued.
- payments on outstanding loans during the year totaled $5 011 315. Of this total $3 867 111 was repaid principal credited back to the Rural Electrification Revolving Fund and $1 144 205 represented interest earned for deposit to the province's General Revenue Fund.
- at year end, the Rural Electrification Revolving Fund held $61 544 750 in loans outstanding to farmers and REA's. The statutory limit on the fund is $75 000 000.

Rural Electrification Program: Grant Activities

Highlights of the grant programs delivered in 1987/88 are as follows:

- Isolated Communities Program - an extension to the program was approved to include electrical services on Metis Settlements. Through this program, grants are available for new residential and farm services to assist in the orderly development of select isolated areas. A total of $175 604 was provided to four Metis Settlements and $110 180 issued for electrical services in other areas of northern Alberta.
- Generating Plant Grants - these grants assist permanent residents in areas remote from the provincial grid to defray the cost of purchasing a generating unit. Three grants totaling $10 337 were issued in 1987/88.
- Other Grants - a grant of $100 000 was made to the Small Power Producers Association of Alberta to facilitate participation in the Small Power Inquiry, conducted by the Energy Resources Conservation Board and Public Utilities Board. The Alberta Federation of REA's received $10 000 in grants to help reduce expenses of REA members attending two provincial conventions. Other grants, totaling $15 677, were made to support a conference on wind energy and co-operative research on electrical matters.

Rural Electrification Revolving Fund
Financial Reports & Summaries 1986/87
Cash Basis (Unaudited)
Fiscal Year Ending March 31, 1988

Table 1
Comparative Loan Balances
Loans Receivable At Year End

Repayment Schedule	March 31, 1988	March 31, 1987
10 year	$ 4 854 804	$ 5 114 610
25 year	29 072 335	27 695 460
Part Two loans	27 121 492	25 896 234
Part Two Capital Rebuild	496 119	—
Total all loans	$ 61 544 750	$ 58 706 304

Table 2
Loans Issued

Loans Advanced	Fiscal 1987/88	Fiscal 1986/87
Term:		
10 year	$ 837 459	$ 838 643
25 year	3 621 832	5 752 426
Part Two	1 738 756	3 537 265
Capital Rebuild	507 510	—
Total loans	$ 6 705 557	$ 10 128 334
Type:		
Loans for new construction	$ 6 096 542 *	$ 10 024 510
Capital Rebuild Loans	507 510	—
Refinancing	101 504	103 824
Total loans	$ 6 705 556	$ 10 128 334
* New construction:		
Part One - individual lien notes	$ 4 357 786	$ 6 487 246
Part Two loans	1 738 756	3 537 265
Total new construction financed	$ 6 096 542	$ 10 024 511

Table 3
Receipts & Adjustments

	Fiscal 1987/88	Fiscal 1986/87
10 year loans principal	$ 1 097 264	$ 1 251 768
25 year loans principal	2 244 958	2 404 403
Part Two loans principal	513 498	588 584
Capital Rebuild loans principal	11 392	—
10 year loans interest	179 205	195 527
25 year loans interest	965 000	852 577
Net Receipts and Adjustments	$ 5 011 317	$ 5 292 859
Total principal	$ 3 867 112	$ 4 244 755
Total interest	$ 1 144 205	$ 1 048 104
Net Receipts and Adjustments	$ 5 011 317	$ 5 292 859

Table 4
Analysis of Loans Advanced
1987/88

	REA Loans		Loans to Individuals		Total	
	No.	Advanced	No.	Advanced	No.	Advanced
10 Year Loans						
Traditional Loans	151	$ 531 609	97	$ 235 472	248	$ 767 081
Over 25 kV.A	—	—	—	—	—	—
Three-phase	1	7 956	9	62 423	10	70 378
Total 10 year	152	$ 539 565	106	$ 297 895	258	837 459
25 Year Loans						
Traditional Loans	368	$ 1 476 935	255	$ 1 008 838	623	$ 2 485 773
Over 25 kV.A	—	—	—	—	—	—
Three-phase	6	49 072	163	1 086 989	169	1 136 061
Total 25 year	374	$ 1 526 007	418	$ 2 095 827	792	$ 3 621 834
Part Two Loans						
Traditional Loans	166	$ 471 981	111	$ 388 740	277	$ 860 720
Over 25 kV.A	—	—	—	—	—	—
Three-phase	7	40 143	123	837 893	130	878 036
Capital Rebuild	21	507 510	—	—	21	507 510
Total Part Two	194	$ 1 019 634	234	$ 1 226 633	428	$ 2 246 266
Total Loans	720	$ 3 085 206	758	$ 3 620 355	1 478	$ 6 705 559

PUBLIC COMMUNICATIONS

D. Nicol
Director

86

The *Public Communications Branch*, is responsible for providing public relations counsel and a complete communications service to the various divisions in the department. It communicates and promotes the achievements and programs of Alberta Transportation and Utilities to external audiences, as well as to staff.

It initiates, develops and implements public information and advertising campaigns in support of departmental policies, programs and services. The branch performs a co-ordinating role in the development of department publications, news releases, audiovisual, display and other communications needs. Public Communications is, additionally, a first point-of-contact for external department enquiries.

During the 1987/88 fiscal period, Public Communications activities included the planning and implementation of winter/summer traffic safety awareness campaigns; a province wide display schedule; co-ordination of special events and the production of a diverse range of print materials for the department.

A major public awareness program was initiated in support of the introduction of provincial seatbelt legislation July 1. This program involved the use of television, radio and print advertising throughout the province.

The department's public displays were featured at various exhibitions throughout the province during the summer months. These were supported by audiovisual and computer safety games, as well as by the "Freeway" bear mascot and related promotional items. Principal theme of the displays was Alberta's seatbelt legislation.

Special events co-ordinated by the branch included official opening ceremonies for Highways 40 and 58, and the official opening of the new La Crete Ferry in October. More than 560 regular news releases were prepared and distributed to the province's media; the department's internal staff newsletter was produced bi-monthly throughout the year, and a regular daily news clipping services was provided to senior staff. The branch also performed an active role in the co-ordination of events to celebrate National Transportation Week in June.

Throughout the year, assistance was provided on internal communications initiatives and branch staff consulted with individual managers in the preparation and implementation of communications initiatives in support of specific department programs.